

# THE NATION'S SCHOOLS

DEVOTED TO THE APPLICATION OF RESEARCH TO THE  
BUILDING, EQUIPMENT AND ADMINISTRATION OF SCHOOLS

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## Looking Forward

THE national recovery program goes on apace with many queer divergencies and inconsistencies. By this time it must be patent to anyone who is even vaguely familiar with the fundamental assumptions underlying mass production that recovery depends on the ability to increase purchasing power. The public works program considers putting people back to work and the development of greater purchasing power on the part of the consumer the most fundamental need of the moment.



The theory underlying the assumptions on which the public works program is operating fully recognizes this activity as one means of creating jobs and increasing purchasing power. The various federal agencies are engaged in strenuous educational campaigns to stimulate buying. The press through both news and advertising columns is carrying this daily appeal to the people. Many leaders in economic thought freely admit that the only hope for economic recovery in the United States lies in immediate extension of mass purchasing power in the country.

While the government is actively concerned in increasing consumer demand, practically every solvent bank in every hamlet, village and city is urging individuals to save rather than to spend. Despite the sad experience of the past three years there is apparently a large degree of fundamental confidence on the part of the people in their neighborhood banks. Torn between two pressures, the government urge to spend and habitual reaction to older slogans plus the effect of former thrift cam-

paigns in the schools, people tend toward savings. Recovery seems somewhat dubious unless government can secure the full and intelligent cooperation of the credit agencies.

FURTHER inconsistencies between the recovery program and actual state and federal practices are obvious. Following the great ballyhoo of pressure propaganda directed toward the so-called "deflation" of government, state and federal authorities, legislative and executive, proceeded to "economize," not by eliminating useless and archaic activities but by cutting horizontally essential local, state and national cooperative activity. Education, recreation, health, police and fire protection, libraries and museums have accordingly been ruthlessly and unintelligently cut or closed. Our professional politicians, instead of having the courage for once in their lives to bring the truth before the people, fell into the habit so traditional in this country and proceeded to wave the realtors' and industrialists' banners for them. The result has been a crippling of local and state governmental effort and a discouraged and fearful personnel so inadequately paid in most instances that their relative efficiency has been greatly reduced.

ONE of the quickest ways to increase buying and general demand would be for federal and state governments to practice exactly what they are preaching and restore by the first of the year 1929 purchasing power to all state employees. Price levels are rising so rapidly in many sections that the underpaid public personnel will be close to the line of actual want by the first quarter of 1934. Restoration of

1929 purchasing power for teachers, librarians, policemen, firemen and health officers along with the more generalized personnel will quickly add several million purchasing units.

Practically 90 per cent of the public revenue paid in salaries is returned to circulation within thirty days. The time is ripe for a much more rational view of taxation. These public expenditures represent real value in the life of our current economic system. They will mean even more in the future. The propaganda view that taxes are conscripted property and rather complete losses is completely untenable from any rational point of view. Cooperative public efforts are not "red ink activity" as the predepression banker so carelessly classified them.

Federal and state governments are spending large sums of money to create jobs and thus increase purchasing power. Some of this effort is in misdirected channels. Few jobs are created and little increase in purchasing power is developed through the building of nonessential roads. Private and public construction offers much better opportunities but the finest of all would be to spend a few hundred million dollars on public personnel and note the immediate stimulus to general buying. There is no danger of hoarding for most public employees are too near the breadline. There would result immediately a real flow of purchasing in various and essential lines. Our recommendation is that the government do a little rational practicing on its own account and restore the 1929 purchasing power to teachers and other public personnel.

MUCH more current public revenue could immediately be directed into vital buying by simply redirecting some of the state and federal expenditure into terminal channels. A year's breathing spell for roads and the use of two-thirds of these funds for more essential services would have a far-reaching effect. Other immediately unessential activity could also be profitably diverted. Until government is ready to act as an example and to meet this need fairly, it is not easy to assume the whole-hearted and enthusiastic support of the recovery act by public personnel. Teachers and other public employees have been neglected and their morale has suffered.

EVEN under present revenue conditions at least thirty-eight states by a slight redirection of expenditure would be fully capable of providing adequately for their public schools during the emergency period. The problem

is rapidly resolving itself into roads *versus* children. Parents should realize this situation more clearly.

IT IS to be hoped that from this time onward the natal day of Benjamin Franklin can be suitably celebrated in the public schools without making it a propaganda occasion for local banks. Franklin's thrift idea is the least valuable of his many contributions to his country. He lived, talked and accumulated in an economy of scarcity. We live in the midst of an economy of plenty and seem totally incapable of taking advantage of it. Let's remember Franklin for his other contributions but drop the traditional thrift celebration that has marked school programs since 1919.

THE danger of a completely centralized public school system to a democratic form of social organization has been aptly illustrated in Russia, Italy and more recently in Germany. Autocracy and dictatorship recognize frankly and openly the vital importance of public education as the central agency in political and social propaganda. One of its first moves is the control of public education. Count Carlo Sforza recently pointed out how Hitler and his Nazis in the brief span of less than six months have transformed Germany's efficient system of public education into an agency for the direct dissemination of Hitlerism.

There has never been a more startling example of the dangers of centralization than that in present day Germany. Let us safeguard the public schools of the United States against such possibilities. It is fondly hoped that the teaching profession in its present discouraged and disturbed state will not make the mistake of German secondary school teachers who accepted eagerly the bait of greater social recognition. The schools in the United States must be kept close to the people and free from control by any party or faction.

IN THE final analysis the best public relations program is the excellence of the school itself and the quality of service given child and adult. No amount of high pressure publicity is ever going to supplant this fundamental requirement.

The Editor

# How to Improve Secondary Schools From a Functional Viewpoint\*

By RUDOLPH D. LINDQUIST, Director, The University School, Columbus, Ohio

**F**UNCTIONAL organization presumably means organization in which understandings as to duties, responsibilities and means are determined primarily with reference to the function of the organization as a whole.

It is disturbing that there should be need for discussing such a subject for it means that we have uncritically accepted and used patterns unsuited to the functions of an educational organization. The complacency necessary to such an uncritical adoption of forms is a dry rot that is always harmful but that is fatal to education. All organization exists to ensure distribution and coordination of members of a group in such a way that some agreed upon objective may be achieved. These objectives in the case of education are observable changes in the behavior of learners. In the case of industry the objective is the production of material units in the greatest possible number for the least possible expenditure of energy.

It scarcely seems necessary to argue that each group should be so organized as to accomplish its function best. That may, it seems, be taken for granted. Why then do we persist in disregarding it in our efforts to effect organization? Why do we in education persist in using patterns and principles that have proved effective in industry unless it is on the unexamined assumption that these same patterns and principles will work equally well in education?

## *Characteristics of Industrial Organization*

Let us examine this assumption in a brief way.

Industrial organization, as I have said, seeks to produce a maximum number of units at a minimum cost. To this end its procedure and product soon acquire the following characteristics:

1. It standardizes its units. Deviation from the standard is costly and undesirable.
2. It subdivides labor minutely, each worker performing specific and unvarying tasks.
3. The planning is done by a few, the execution by many. The more nearly automatic the execution

becomes, the greater is the probability that there will be a uniform product.

4. The personal growth of members of the organization is subordinated to the production of goods, often to an extent that amounts to exploitation.

5. Emphasis is placed upon unquestioning obedience and prompt carrying out of orders.

6. The relationship between officials and workers is that of superior and inferior.

7. In the relationship between workers there is little call for intelligent adaptation of one to the other. The routine for each is fixed.

8. Efficiency is the watchword of those who head the organization. Profit is their motive.

## *Education Is Not Seeking Standard Units*

Such principles and procedures are functional in the highest degree when the function is that of making automobiles or refrigerators. But are they functional as aspects of an educational organization?

An educational organization is not interested in the production of standard units. It must place a premium upon the exercise of intelligence at every stage of the process. It follows that relationships between officials and teachers must be such as to liberate intelligence and relationships between teachers must be such as to stimulate thought. Planning must be a cooperative effort, for the judgments of all officials and teachers must be given place in arriving at a solution to problems of method. Since there is in the educational process this emphasis upon the use of intelligence, it follows that one objective must be the personal growth of all members of the organization. The exploitation of some for the achievement of an objective result causes the organization to defeat its own object.

Since the function of an educational institution is to liberate intelligence, it must be characterized by freedom, by interstimulation, by absence of lines of cleavage within the organization, by thoughtful participation by all its members, by absence of dictation, by variety in results, by originality and by creativeness in attack.

\*This is the third of a series of articles dealing with functional administration. The first article, by Dr. John K. Norton, appeared in the October NATION'S SCHOOLS; the second, by George C. Kyte, was published in November.

In modern high schools a number of things operate against such a functional plan. Size is one. Large faculties invite departmentalization. Lines of cleavage are laid down. Science teachers do not all know each other, nor are they acquainted with the social science, English, language and mathematics teachers. They cannot, therefore, contribute to the extension of meanings in these other areas as they could if they lived on terms of intimacy and in daily contact with the teachers of these other subjects. Their own growth is impaired because of this lack of contact and the child gets piecemeal a disjointed view of the world.

#### *Other Effects of Yielding to Industrial Ideal*

Size also contributes to the separation of such functions as teaching and counseling, teaching and out-of-school life, teaching and discipline. The pity is that often when size is not a factor this same subdivision of functions is nevertheless carried out in the interest of what we choose to call efficiency and in imitation of patterns that are functional in industry. The small school has its vice principals, its counselors and its department heads, each with prescribed areas within which to function. A good share of the principal's time, if he is aware of the value of the interstimulation of persons on his staff, must be given to setting up still further procedures whereby the deadening effect of these cleavages may be overcome.

Another obstacle to the pupil's realization of all that he might gain from his educative experience is the group of prescriptions with which both he and the teacher are hedged about. These prescriptions, employed in the interest of order and efficiency, set up an order in terms of a logic that is often foreign to that of the pupil's own mental processes. His own purposing does not have adequate play as an organizing factor and hence his educative experiences tend to be unrelated and disjointed.

A third aspect in which educational practice has yielded to the influence of an industrial ideal is the matter of recording and measuring outcomes. We have leaned toward objective results that can be transformed into standard units. These we have isolated, measured and recorded as rather final and certainly most important outcomes of the learning process. We point with a great deal of pride to graphs and charts. Undoubtedly the business man is impressed for it is a language he can understand. But wouldn't it be better to try to teach him a new language rather than to adopt his vocabulary and his point of view?

The foregoing statements have been largely negative. Let us now make some constructive suggestions to principals of secondary schools in order

that their organizations may serve more effectively the needs of youth. These suggestions are:

1. The appearance of principals' offices should be changed. The present counters extending across the fronts of most offices say to one so bold as to enter, "Please state your business promptly and get out. We are busy here." Busy about what, one often wonders.

2. The set-up of counseling should be changed so that it really becomes one with teaching and learning. The modern counselor, with her neatly arranged office, impressive files and card catalogues and her carefully worked out schedules sees each pupil for ten or fifteen minutes once a term about his program. It all looks businesslike enough. But what difference of a constructive nature does it make to the pupil? There should be a time and place for confidences that are vital and direction-determining and the chances are that it is not in such a formal setting, or at any scheduled hour or in the presence of so much data in the form of scores and grades.

3. Supervision should be organized on the assumption that teachers are people; that their personal growth is essential to improved teaching; that such growth takes place best in an atmosphere that encourages thinking and initiative; that the principal's functions are to help teachers define their problems, help them to solve these problems, and help them to evaluate the results of their work, and finally, that teachers can help each other, provided the principal makes possible the needed contacts.

4. The life of the school should be organized so that it is socially educative and so that it contributes to the development of character.

#### *Principal Should Be a Leader Not a Dictator*

5. The organization of the curriculum should be so guided that subjects are less isolated from each other and so that meanings acquired in contact with one teacher are deliberately enlarged by contact with other teachers.

6. Much present record keeping should be eliminated and for this highly abstract symbolism should be substituted a more detailed record that calls for intelligent use of the English language.

7. The principal should abdicate as a dictator and become a democratic leader whose threefold functions are: to make the group articulate, that is, to put into programs the finest aspirations of the group; to assign duties with concern for the effect of the assignment upon the growth of the one to whom the duty is assigned, and to encourage the group to evaluate the work it has done so that out of this evaluation may come clearer vision, finer aspirations and a sense of personal worth.

# Cleveland Extends Cordial Invitation to Visiting Superintendents

By ROBINSON G. JONES, Director of High Schools, Cleveland Public Schools

CLEVELAND with its own record of real achievement is an excellent convention city for the Department of Superintendence of the N. E. A., which meets there on February 24 and remains in session until March 2.

Cleveland is a city of diversified industry. The backbone of its development has been its proximity to the rich Lake Superior iron ore region and the coal and limestone fields of Pennsylvania and Ohio. Iron and steel have been Cleveland's major industries since 1828 when the first smelter was established. From this little plant, with a weekly output of twenty tons, has developed the great industry of today. Cleveland's blast furnaces now have a capacity of three million tons of pig iron annually. One of Cleveland's most modern plants is that of the Otis Steel Company where a continuous mill turns out a finished product.

Steel has a close second in the electrical industry. The annual output of electrical machinery, apparatus and supplies is valued at more than \$60,000,000. At Nela Park in Cleveland are the laboratory headquarters of the National Lamp

Works of the General Electric Company. Visitors are welcome at the University of Light and special inspection trips are arranged. Visitors are welcome also at the new \$2,000,000 plant of the Addressograph-Multigraph Co.

The oil industry was cradled in Cleveland and has had a wonderful growth. Today the great cracking stills and refineries of the Standard Oil Company present a fascinating study.

Cleveland enjoys national and international reputation as a city of surveys, research and plans. The city has studied its population, its health, its administration of justice, its housing and many other phases of its life. It probably knows more about itself than any other city. But for the visitor who has time for little more than externals, Cleveland's habit of planning can be seen best in its civic and cultural centers—the group or mall plan of public buildings and the cultural and educational group. These two plans do not include all that is good or worthy in these fields but they do bring much within easy observation of the visitor.

Cleveland's famous group or mall plan is in the



*The Cleveland Public Auditorium is one of the finest municipal halls in the United States. The seating capacity of the main auditorium is 13,156.*



*Cleveland's cultural plan, a group of educational and cultural institutions, working co-operatively, has its place at University Circle. In this area is Severance Hall, the home of the Cleveland orchestra, which is seen in the background of the picture at the left.*

*The Cleveland Museum of Art (below) overlooks a lagoon and garden. The building houses some of the finest works of art to be found in this country. An exhibition of water colors and works of American modern masters in pen and pencil will be held during the convention.*



heart of the downtown area and fronts on the lake. Here grouped around a central park are many of the city's essential buildings—the city hall, the county courthouse and the United States postoffice. One of its ornaments is the Cleveland Public Library which ranks in architecture, books and organization as one of the finest libraries in America. On the mall also is the new board of education headquarters, an ideal combination of business interior and architectural exterior. School executives will be interested in this building and its equipment. No doubt many visiting superintendents will attend meetings in the small auditorium on the first floor, one of the most satisfactory auditoriums in the city.

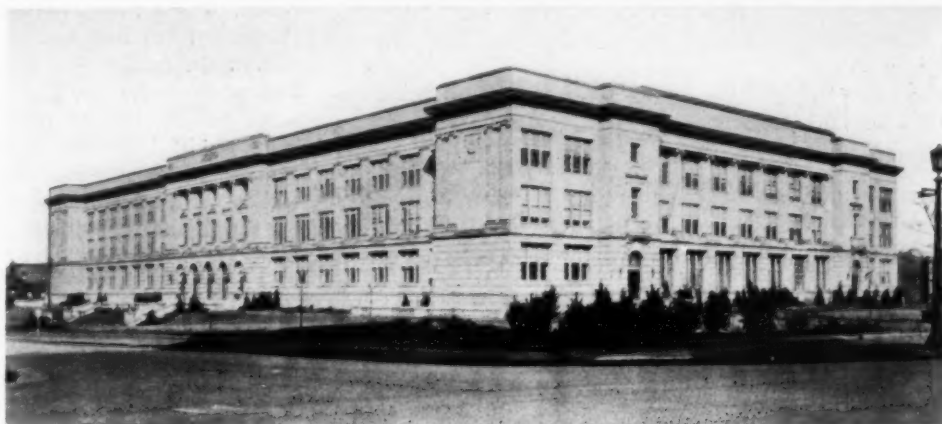
On the mall is Cleveland's immense public auditorium, one of the finest and most serviceable municipal halls in the United States. Here fourteen events can be held simultaneously without interfering with each other. The seating capacity of the main auditorium is 13,156. Below the grass and trees of the mall, as an annex to the public auditorium, lies a unique five-acre exhibition hall. The new municipal stadium which seats 75,000 also has a place on the mall.

In the downtown area also is Cleveland's great new union terminal with its fifty-two-story tower dominating the city's sky line. Certainly there is no better place to see Cleveland in its physical aspect than from the observation porch of this tremendous tower.

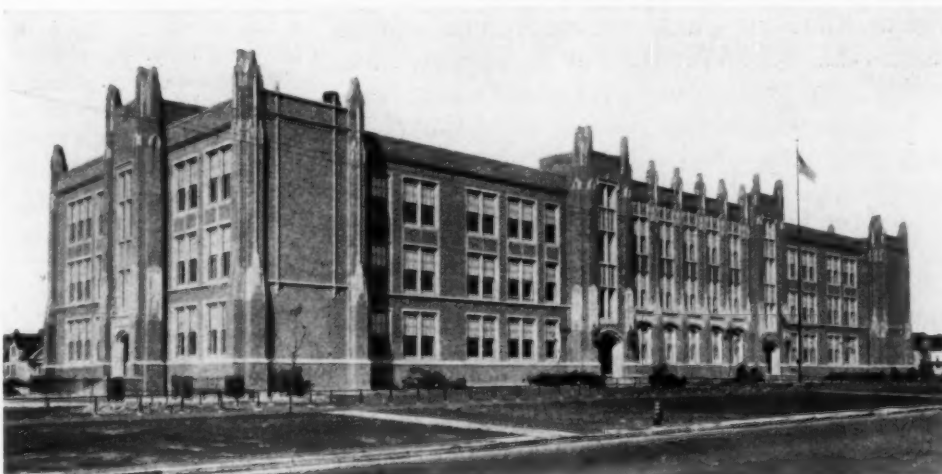
Cleveland's cultural plan, a group of educational and cultural institutions working cooperatively and exchanging facilities and services, has its place at University Circle, in one of Cleveland's secondary business sections. Overlooking a lagoon and garden is the Cleveland Museum of Art, a building carefully designed for its purpose and housing some of the finest works of art to be found in this country. An exhibition of water colors and works

of prominent American modern masters in pen, pencil and crayon can be seen at the Cleveland Museum of Art from February 11 to March 14. This no doubt will be popular with delegates.

In this area is Severance Hall, the home of the Cleveland orchestra. Its auditorium is an excellent place in which to hear music and convention visitors are urged to visit it. Near-by are Western Reserve University and the magnificent group of



*The John Hay High School (above) is the newest and perhaps the most elaborate high school in Cleveland proper. Below is the Nathan Hale Junior High School.*



hospital, medical, dental and nursing school buildings which make up the medical center.

Epworth Memorial Methodist Church and the beautiful Church of the Covenant are in this group and only a few blocks away is the Temple, an architectural masterpiece and the home of the congregation of Rabbi Abba Hillel Silver. The First Church of Christ Scientist, a building with unique features, occupies a point of the hill overlooking University Circle. St. Agnes Church is one of the best examples of Romanesque architecture to be found anywhere, while Trinity Cathedral is the Episcopal center of the city.

But let us return to University Circle and the

cultural group. Case School of Applied Science has its buildings in this group, as has the Cleveland School of Education, while the Cleveland School of Art is not far away. The Western Reserve Historical Museum is here and the Cleveland Museum of Natural History will one day have its home with the others. On the southeast bend of University Circle is the John Hay High School, the newest and perhaps the most elaborate high school in Cleveland proper.

#### *Cleveland Is Noted for Its Special Schools*

For nearly twenty years Cleveland has been devoted to the principle of special schools and has been a leader in the study of individual differences. The technical schools and the commercial high schools came first. To these have been added the Sunbeam School, a new and most efficient school for crippled children, and Alexander Graham Bell School for the deaf, a ranking institution of its kind in the country. The Thomas A. Edison School for delinquent boys differs from most corrective public schools, a difference largely in management. The Jane Addams School for Girls provides vocational education of a novel character. The fact that this school has been able to place every girl student of approximately sixteen years of age in a job during the past five years indicates its value. The Boys' Farm at Hudson, Ohio, and the Blossom Hill School for Girls at Brecksville, Ohio, provide for all court cases. Cleveland's new Juvenile Court and Detention Home is a building pleasing in appearance and admirably planned for its purpose.

Cleveland has a school for tuberculous children. The Cleveland Trade School for Boys is a part-time school for apprentices. Willard School is a subordinate trade school in connection with West Technical High School.

Cleveland's department and specialty stores are filled with merchandise from all parts of the world. They are happy hunting grounds for the visitor who wants to take home gifts for the family. Shops and hotels are in close juxtaposition and are near to the theaters of Playhouse Square where plays, movies and vaudeville may be seen. There are a number of pleasant places near-by in which to dine and dance.

Cleveland's Playhouse is a school of the drama. Here scene design, costume making, acting and playwriting are taught and put to practical use. The Playhouse had its start when a little group of amateurs enacted plays in a barn. Today it has a beautiful building, housing two theaters and the necessary workshops. It stages nightly during the season two plays of merit produced in a style that is far from amateur.

## "Rethinking Supervision"—A Really Helpful Year Book

The 1933 year book of the Michigan department of elementary school principals, entitled "Rethinking Supervision," is unusual for publications of this type.

In planning the year book the editorial committee enlisted the cooperation of principals, supervisors, superintendents, psychiatrists, public health experts and other specialists in "rethinking" five problems in applied supervision. These were: (1) what constitutes freedom in the classroom; (2) best methods for the determination of promotion standards; (3) types of supervisory organization that promote teacher and pupil growth; (4) how to conserve the health of professional workers in times of increased load, and (5) the problem of teacher rating.

Symposiums on these five problems compose the central section of the book. The preceding section sets the stage for the discussion with an article, "The Reconstruction of Supervision—A Challenge," by Edith M. Bader, assistant superintendent of schools, Ann Arbor, and with two abstracts of materials dealing with the techniques of cooperative action. The closing section presents three appraisals of the first two sections—one by a committee of supervisors, one by L. H. Lamb, superintendent of schools, Flint, and one by Prof. S. A. Courtis, University of Michigan.

"In general," says Professor Courtis, "the dominant resultant effect in consciousness of reading and rereading the year book is one of exhilaration and enthusiasm. It seems that as a profession we are making progress. . . . This year book is different. It illustrates the cooperative planning it preaches. It puts into practice the techniques it advocates. It reveals unsuspected potentialities in professional cooperative effort and stimulates creative planning for even more effective achievement."

G. Robert Koopman, principal, Tappan Junior High School, Ann Arbor, was chairman of the editorial committee. The year book is available through the offices of the Michigan Education Association, M. E. A. Building, Lansing, Mich.

## Why School Records Should Be Preserved

What disposition should be made of old school records? How long should such records be preserved? In a recent circular the Board of Education of the City of New York points out that its experience shows that such records should be preserved as long as possible. The board is frequently called upon by the city and state departments of public welfare, the probate courts and the naturalization bureaus for records that help to establish the identity, age or nationality of persons who attended public schools.

When the accumulation of inactive records is such as to necessitate dead storage, the circular says, such records should be carefully wrapped or cased, adequately labeled and stored in an accessible place in the school building. The making of boxes for the storage of old records may be a timely and appropriate project for classes in shopwork.

When a school is discontinued, the circular says, all records should be carefully cased and labeled. These records should revert to the custody of the district superintendent, who should designate a storage place and maintain in his own office a record of such storage.

# What Is the Constitutional Status of Federal Grants to States?\*

By CLARENCE E. ACKLEY, Research Associate in Administration, School of Education, University of Pittsburgh

IF THE insistent and omnipresent demand for reduction of governmental expenditures should inspire an influential group of citizens to challenge the constitutionality of federal grants in aid, what attitude would probably be taken by the Supreme Court of the United States regarding the subventions claimed by states from the federal government for vocational rehabilitation, agricultural extension and the widely established program of vocational education under the provisions of the Smith-Hughes Act? Is there a strong probability that the constitutional rights of congress to make such grants might be successfully challenged?

The answer to these questions must be found in the history of federal grants and in the numerous decisions of the federal courts pertaining to them.

The power of congress to make such grants was questioned in the convention which framed the Constitution. On September 14, 1787, vote was taken on measures submitted by Charles Pinckney seeking "to establish seminaries for the promotion of literature and the arts and sciences" and "to establish public institutions, rewards and immunities for the promotion of agriculture, commerce, trades and manufacturing." Pinckney's proposals failed of passage. He then joined with Madison in a motion proposing as one of the powers of congress "to establish a university, in which no preference shall be allowed on account of religion." Gouverneur Morris, however, ruled: "It is not necessary. The exclusive power at the seat of government will reach the object."<sup>1</sup>

Numerous congressional enactments and supreme court decisions<sup>2</sup> coincide with that early opinion of Gouverneur Morris. The Rectangular Survey Ordinance of 1785, the Ordinance for the Government of the Northwest Territory, the ordinances establishing the other territorial governments and the Enabling Acts for the admission of the several states, all reveal a profound national interest in education. This interest, first manifesting itself with the township land grants to common

schools, made available to the states for that purpose grants totaling more than 94,000,000 acres.

But federal aid for common schools did not end with the township grants. It also included aid through the 5 per cent fund from sale of other public lands totaling a distribution of approximately \$17,000,000, through the surplus revenue deposit totaling more than \$28,000,000 and through swamp land grants totaling approximately \$15,000,000. Then there are the extensive grants made under the Morrill Act, the Hatch Act, the Smith-Lever Act, the Smith-Hughes Act and the Smith-Towner Act. Under the Smith-Hughes Act alone federal aid mounted in the first eight years from \$1,700,000 annually to \$7,200,000 for the promotion of vocational education.<sup>3</sup>

## *Government Has Been Generous to Schools*

The propriety of this aid extended by the federal government has not gone unchallenged. As early as 1859 the constitutionality of federal grants in aid to the states was questioned. In that year President Buchanan vetoed an act of congress similar to the Morrill Act, approved by President Lincoln in 1862. The chief reason President Buchanan gave for his veto was that he doubted the constitutionality of federal participation in education.<sup>4</sup> Moreover, the federal courts have frequently been called upon to decide various issues pertaining to this participation. As a result, prior to the enactment of the Smith-Hughes Act in 1917, six important principles had been definitely established regarding federal grants.<sup>2</sup> It is sufficient here, however, to say with Justice Brewer that nothing is clearer than that the policy of the United States Government has been a generous one in respect to grants for school purposes.<sup>5</sup>

Following President Lincoln's approval of federal grants, the generosity of the federal government regarding education began to embrace a much wider range of interests. In addition to the grants in aid of common schools, dating from the earliest days of the republic, industrial and agricultural work in the colleges of agriculture and mechanical arts was aided by the Morrill Act of 1862. Then

\*The major portion of this article is taken from an unpublished Ph.D. thesis submitted by the author to the University of Pittsburgh, Feb., 1933.

with the Smith-Hughes Act in 1917 secondary schools and teacher training institutions were given assistance through the initiation of a policy for stimulating industrial training and studies in the public schools and for providing professional training for teachers of these subjects.

The stimulating effects of the Smith-Hughes Act were soon apparent. The News Letter of the National Society for Vocational Education in June, 1922, summarized the results up to that date, showing its effects in promoting the establishment of state boards of vocational education, in the enactment of compulsory attendance laws, in the increasing of local appropriations for vocational education, in the enlarged enrollment in vocational schools and in the greater number of teachers preparing to teach vocational courses.<sup>6</sup>

### *Two Test Suits Tried by Supreme Court*

In the light of this speedy and extensive response of the states to the opportunity to obtain the federal assistance provided by the Smith-Hughes Act, it is not strange that congress soon extended the policy of grants in aid to include the Civilian Vocational Rehabilitation Acts of 1920, 1924 and 1930, designed to restore to civil employment persons disabled in industry; the Maternity Acts of 1921, for the purpose of cooperating with the states to reduce maternal and infant mortality and to protect the health of mothers and infants, and the George Reed Act of 1929, providing liberal aid for training in home making. All of these subventions provided for a distribution and administration of funds in a manner similar to the requirements set up in the Smith-Hughes Act.

In 1923 the constitutionality of federal appropriations benefiting local communities and administered by a joint management of state and federal government after the manner of the Smith-Hughes provisions was put to the test in two suits reaching the Supreme Court of the United States. The suits sprang from objections to the provisions of the Maternity Acts but the issues raised were common to all the acts for grants in aid and were especially applicable to the Smith-Hughes provisions. The two cases were *Massachusetts v. Mellon* and *Frothingham v. Mellon*. They were argued and considered together. In delivering the opinion of the court, Justice Sutherland confined his remarks to a few of the many issues raised.

"In the last analysis," said the court, "... the complaint of the plaintiff state is brought to the naked contention that congress has usurped the reserved powers of the several states by the mere enactment of the statute, though nothing has been done and nothing is to be done without their consent; and it is plain that that question, as it is thus

presented, is political and not judicial in character, and therefore is not a matter which admits the exercise of the judicial power. . . . Insofar as the case depends upon the assertion of a right on the part of the state to sue in its own behalf we are without jurisdiction."

As to whether the state might maintain the suit as the representative of its citizens, the court said: "The citizens of Massachusetts are also citizens of the United States. It cannot be conceded that a state, as *parens patriae*, may institute judicial proceedings to protect citizens of the United States from the operation of the statutes thereof."

As to the contentions of Mrs. Frothingham as a federal taxpayer, the court pointed out that an injunction is a proper remedy in case of complaint regarding municipal taxation because of the peculiar relation of the corporate taxpayer to the municipal corporation, which is not without some resemblance to that relationship subsisting between stockholders and private corporations. But the relation of a taxpayer of the United States to the federal government is very different.

"His interest in the monies of the treasury—partly realized from taxation and partly from other sources—is shared with millions of others; is comparatively minute and indeterminable; and the effect upon future taxation, of any payment out of the funds, so remote, fluctuating and uncertain, that no basis is afforded for an appeal to the preventive powers of a court of equity."<sup>7</sup>

### *A Matter for Congress to Decide*

The court also attached much significance to the fact that no precedent had been pointed out sustaining the right of either a citizen or a state to maintain suits on these issues, although, since the formation of the government many federal statutes have been enacted appropriating monies for nonfederal purposes.

In the light of the decision in the cases of *Massachusetts v. Mellon* and *Frothingham v. Mellon* and in view of the well established policies of the government shown by the other data here presented, it seems evident that the whole question of continuance of federal grants in aid for education within the several states is purely a matter for the determination of congress—not the courts.

### *Bibliography*

<sup>1</sup>Farrand, Max, Records of the Federal Convention, vol. 1, p. 325, Yale University Press, New Haven, 1911.

<sup>2</sup>See citations in *Cooper v. Roberts*, 59 U. S. (18 How.) 173, 15 L.Ed. 338 (1855). See also Ackley, Clarence E., Constitutional Limitations on Legislation for the Common Schools, pp. 240-257. An unpublished Ph.D. thesis, University of Pittsburgh (1933).

<sup>3</sup>Cubberley, E. P., State School Administration, pp. 26, 27, 32, 35, 38 and 64, Houghton Mifflin Co., Boston, 1927.

<sup>4</sup>Reisner, E. H., Nationalism and Education, p. 425, The Macmillan Company, New York City, 1923.

<sup>5</sup>*Johansen v. Washington*, 190 U. S. 179, 47 L.Ed. 1008 (1903).

<sup>6</sup>News Letter of the National Society for Vocational Education, June, 1922.

<sup>7</sup>*Massachusetts v. Mellon* and *Frothingham v. Mellon*, 262 U. S. 447 (1923).

# Value of State Textbook Adoptions Is Debatable

By NELSON B. HENRY, Assistant Professor of Education, University of Chicago

STATE uniformity in textbook adoptions developed rather rapidly in the latter half of the nineteenth century. At the present time uniform textbook laws are effective in twenty-five states.

While no new states have been added to the state adoption group since 1917, there have been frequent efforts to secure such legislation in other states. On the other hand, efforts are continually being made to bring about repeal of these laws in states where uniformity of textbooks is prescribed. The present discussion is concerned with the arguments commonly submitted in support of or in opposition to the state adoption plan.

In the early history of the schools it was the common practice for pupils to bring to school whatever books the family library afforded or whatever text or edition the local storekeeper might have in stock. Much of the early agitation for state laws requiring the use of uniform series of schoolbooks had its origin in the complaints of disheartened teachers against this incongruous situation.

## *Variable Meaning of Uniformity*

No such conditions have existed in recent years. In every community the influence and authority of the state school system are sufficient to prevent any such lack of orderliness in this community enterprise. As a result, practically every school community now maintains a program of instruction based upon a rational selection of textbooks.

The term uniformity as applied to textbooks is now used primarily to designate the areas within which some specified authority has power to control the selection and use of textbooks in the public schools. In twenty-five states the state board of education or a special textbook commission is empowered to select textbooks for use in the public schools on a statewide basis. These state adoption states are Alabama, Arizona, Arkansas, California, Delaware, Florida, Georgia, Idaho, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Mon-

*A significant aspect of the situation with respect to state adoptions in recent years is the fact that the constant efforts to establish uniformity are invariably prompted by politicians and are as consistently opposed by educators*

tana, Nevada, New Mexico, North Carolina, Oklahoma, Oregon, South Carolina, Tennessee, Texas, Utah, Virginia and West Virginia. In five states the county board or a special textbook commission is authorized to select books for use in the schools of the county. The county adoption states are Maryland, Missouri, South Dakota, Washington and Wisconsin. County adoption may be established in any county of Iowa by a majority vote.

In the remaining states regulations regarding textbooks are made by the authorities in charge of the schools of some unit smaller than the state or county, such as the city, town or township, or the school district. That is, the significant aspect of textbook uniformity under the laws now prevailing in the different states is the fact that in twenty-five states the uniform use of the books selected is prescribed for the state as a whole, whereas the laws of twenty-three states prescribe or permit the establishment of uniformity regulations over smaller units of school organization within the state.

There are also some differences in the scope and the meaning of the uniformity regulations as these are applied in the different state adoption units. For example, textbooks are not always prescribed by state authorities for use in all grades of the common school system. Arkansas, Nevada and West Virginia do not clothe the adopting board with authority to prescribe textbooks beyond the elementary grades. In Alabama, Arizona and Georgia the adopting agency may, but is not required to, select the books which are to be used in the high schools.

In ten of the twenty-five uniformity states the books prescribed are not limited to a single text for each grade or subject. In such instances the

adopting agency selects two or more texts for each subject, the complete list of books selected being known as a multiple list. Local school authorities may then select from this multiple list and prescribe the books to be used in the schools under their jurisdiction.

Uniform textbook regulations vary also in the state adoption states with respect to the extent to which they apply to different types of local units within the state. There are nine states in which either cities or school districts of a specified class are exempt by law from the uniformity rule which in general applies to the schools of that state. These exemptions are made in recognition of the fact that certain classes of communities tend to maintain higher educational standards than can be prescribed for the state school system as a whole.

It is apparent, therefore, that the term uniformity of textbooks does not denote a single set of textbook regulations administered in like manner and with like effect in the several areas described as uniform textbook territory. There is nevertheless a common motive back of all the variable plans under which textbooks used throughout a state school system are chosen and prescribed by central rather than by local school authority. This motive is the desire to ensure equally favorable opportunities for instruction in all of the schools of the state.

#### *Arguments for Statewide Adoptions*

Four major arguments for statewide adoptions have been carried through the long period of controversy beginning in 1850. These may be briefly summarized.

1. The mobility of population is the basis of two lines of argument for the uniform textbook plan. First, there is the plea that parents frequently incur the expense of a complete new outfit of books for their children when they move from one school district to another. Much emphasis is placed upon the fact that change of residence occurs most frequently among the very classes who can least afford this additional cost for their children's schooling. Even in recent years it is noted that children are often kept out of school on this account. So vigorously was this fact stressed in many of the earlier campaigns for uniformity legislation that it is generally regarded as the origin of the uniform textbook movement. The second argument arising from the experience of families moving to another community is that the children have difficult adjustments to make and their progress in school work is frequently retarded when they are required to change to unfamiliar textbooks.

Some interesting comments have been made rel-

ative to the urge for legislation in relief of the financial burden upon parents and the educational disadvantages to children under these conditions. At the 1908 meeting of the N. E. A., Supt. Carleton B. Gibson of Columbus, Ga., asserted that the demand for state uniformity of textbooks "came from sympathy for the less fortunate in educational matters" rather than from a desire for unification of school work throughout a state. Much of the discussion has been in this vein. Families that must move from year to year under the vicissitudes of tenant farming or unskilled labor are, in the light of this argument, to be especially favored and protected in their relations to the public schools. It is as though the whole concept of free schooling for the masses rests upon legislation safeguarding the families who move from one locality to another within the state against the financial hardship and the educational hazard of a change of textbooks.

#### *Legislating for the Minority*

It goes without saying that this argument has not been universally subscribed to. It has much less weight in recent years because of the progress of the free textbook movement. Moreover, it has always been more or less effectively refuted in terms of the limited number of persons affected. Superintendent Greenwood of Kansas City, writing in February, 1891, declared that such legislation "is legislating for the minority at the expense of the majority. The number who move in any given year constitute much less than 1 per cent of the population. A law based upon such ground is manifestly indefensible."

2. The prices at which textbooks have been made available through local agencies have generally been cited as an argument for state adoptions. There are many reports of varying and unreasonable price schedules in different localities in the days before statewide regulation of prices became generally established. This argument looms large in the reports of legislative proceedings and apparently has figured in numerous political campaigns. In general, these discussions are replete with exaggerated estimates and a variety of misleading pronouncements.

It is recognized, however, that textbook prices were actually lowered as the state adoption movement progressed. It is noted, moreover, that prices were lowered not only in state adoption territory but in other states as well. Monahan<sup>1</sup> attributes this general price reduction to the terms of the contracts under which state adoptions are commonly made. But if the higher prices of textbooks

<sup>1</sup>Monahan, A. C., *Free Textbooks and State Uniformity*, Bulletin No. 36, U. S. Bureau of Education, 1915, p. 24.

of earlier years were directly affected by state adoption legislation, it is contended that the same effect is now attained by legislative measures which do not involve the adoption principle. This fact is noted in recently published statements of representatives of two leading textbook companies. These statements are as follows:

"In the early years of state uniformity prices were lowered. Later, many states, of which Michigan and Illinois are examples, passed laws requiring the publisher offering his books to give bond that the prices were the lowest quoted anywhere. As a result, books are furnished in such states as Michigan and Illinois at the same prices at which the same books are furnished in Indiana. It is apparent, therefore, that the argument in favor of state uniformity because it means cheaper books no longer holds."<sup>1</sup>

"So far as the cost is concerned, the seeming argument vanishes when we realize that the circumstances are such that no publisher can legally quote a price for a specific textbook in one state that is lower than the price publicly announced in any other state. Consequently, a state that has no official machinery of state adoption can, and does, secure that book at the lowest price quoted for it elsewhere."<sup>2</sup>

#### *Is a Better Choice of Textbooks Assured?*

3. It is argued further that the state adoption plan ensures a better choice of textbooks for the schools of the state as a whole. The lack of ability of the average local school board member to pass judgment on the offerings of competing textbook firms is so obvious that any selection of books for which such persons are responsible is at once discredited by virtue of being thus chosen. Or, if the incompetent lay officials are intelligent enough to leave the selection of books to the teacher or to the teaching staff, the chance of error is still not entirely removed. In fact, the unintelligent way in which teachers have commonly exercised the privilege of textbook selection or have attempted to influence adopting boards has been cited as a factor in furthering the progress of adoption legislation.

It is also asserted that local school authorities are subjected to pressure and temptation by maneuvering textbook agents whose only interest is the promotion of textbook sales. In the early writings there are frequent references to the textbook "trust," with swarms of agents actively participating in local school elections and wielding a powerful influence in the appointment of teachers and school superintendents who were favorable to

their publications. Instances are noted of a single publishing company being able to secure a contract covering all of the books to be used in the local school system.

While the conditions noted are frequently described as generally prevalent in the sense that they could be observed in many areas, there is considerable evidence that the tendency in recent years has been definitely in the direction of improvement in both the methods of textbook selection by local school authorities and the ethics of textbook salesmanship.<sup>1</sup> Not only do local school boards commonly adopt books only as recommended by the teaching staff, but also teachers are preparing themselves for this responsibility by careful study of methods and devices designed to secure a dependable appraisal of the books available for adoption. Moreover, frequent reference is made to the favorable conditions existing in such states as Massachusetts where textbook control has always been left in the hands of local authorities.

With reference to the policies of publishers and their representatives in promoting the sale of their publications, the findings of an extensive inquiry pertaining to the ethics of marketing and selecting textbooks are summarized by Dean Edmonson in the conclusion "that the standards of practice in selection of textbooks not only are higher today than formerly but also are relatively higher than those which prevail in many other lines of business."<sup>2</sup>

4. The fourth argument that has been generally urged in furtherance of state textbook adoptions is the ease and convenience with which uniform courses of study can be formulated and administered on behalf of the schools of the state as a whole. This argument appears frequently in the writings and official reports of state school superintendents, especially in the period between 1890 and 1910.

#### *Course of Study Problem Less Perplexing Now*

It is urged that with large numbers of inadequately trained teachers in the schools, particularly in the villages and rural districts, a satisfactory quality of instruction cannot be assured except on the basis of a standard course of study, prescribed and recognized as the minimum program for the schools of the state. Not only does it simplify the task of formulating the course of study to have it based upon uniform series of books, but also there is much less difficulty involved in securing a general adherence thereto. Moreover, teachers of meager professional training are

<sup>1</sup>National Society for the Study of Education, Thirtieth Yearbook, Part 2, pp. 180-81.

<sup>2</sup>Whipple, Guy M., "The Selection of Textbooks," Am. School Board Jour., May, 1930.

<sup>1</sup>National Society for the Study of Education, op. cit., chap. 7 to 10.

<sup>2</sup>Ibid., p. 308.

at a disadvantage in attempting to follow the state course of study under a system of local adoptions since they must reinterpret this course of study in terms of the content and methodology of a new set of textbooks as often as a change of teaching position may require.

Recent writings place much less stress upon the relation of uniform textbooks to the problem of maintaining a satisfactory state course of study. The growing recognition of the need for reasonable flexibility in the systems of instruction designed to cover statewide areas, the increasing proportion of well trained teachers and the extension and improvement of supervision have caused the course of study problem to lose many of its perplexing aspects. There are now so many books of excellent quality that the choice of any set as the basis of the course of study for a state school system could not possibly favor any significant percentage of the teachers involved, but must inevitably cause more or less disappointment to large numbers of the teaching force who have decided preferences for other books.

#### *Arguments Against Statewide Adoptions*

While the extension of state adoption territory under the impulse of these several motives continued at varying rates of progress for fifty years or more, and while the system seems to be thoroughly grounded in many of the states where it is now effective, there has been impressive opposition to this progression even from the beginning and there is much current dissatisfaction with both the processes and the results of its operation in all state adoption areas.

Various arguments characterize the statements of opponents of the numerous proposals to establish textbook uniformity, both in the states where the movement was successful and in states where it was thwarted, and in the contentions of critics of certain administrative tendencies and the educational outcomes frequently observed in consequence of the uniformity program. Brief mention of ten of the more significant of these observations will serve the major purposes of the present discussion.

1. Wherever adoptions are made on a statewide basis, the adopting agency, whether the state board of education or a specially appointed textbook commission, is a political or semipolitical body. In nine of the twenty-five uniformity states, the governor is a member of the adopting board. In twenty-two states the members of the board, or some of them at least, are appointed by him.

While the tendency in recent years has been in the direction of professional rather than political appointments, there is much complaint even now

of abuses of this appointive power in giving expression to political preferment, not entirely exclusive of appointments going to members of the teaching profession. To the extent that political motives may influence these appointments, there is an almost certain loss of any possible advantage of a state agency over the local adoption system so far as sincerity of action is concerned. In such a situation there is an inevitable play of political pressure, either directly through the instrumentality of "political lawyers" employed by publishers, or indirectly through friendly contacts more or less innocently established or the recognition of obligations previously incurred.

2. The size and nature of the contract covering the textbook requirements of schools over a statewide area not only make the selection of textbooks a matter of interest to the politicians, but they constitute also a constant threat of corruption and enshroud the whole adoption procedure in suspicion, regardless of the prominence and reputation of the several members of the adopting board. There are so many notorious traditions of bribery and other shady practices in the folklore of state adoptions that even a friendly confidence is often strained in the effort to understand and account for the decisions arrived at in the sessions at which adoptions are made.

Similar declarations may be gleaned from the pages of journals and documents year by year from then to now. While it is obvious that conditions have vastly improved in later years, the evidences of hazard are still to be noted in litigation, in political turmoil, in legislative investigations, in accusations and caustic criticisms that are the subject matter of 1933 news reports. The conclusion expressed by numerous interested observers is that the evil will persist, at least in some form and to some degree, so long as the adoption system prevails over any statewide area.

#### *Requirements of Local Communities Vary*

3. The scope and nature of a state uniformity program are such that it is impossible for state boards or commissions exercising the right of choice of books for various communities throughout the state to render competent service to the schools. In general, the lay members of such boards have no qualifications for passing judgment upon textbooks in any situation. In some instances the board is made up of or includes members of the teaching profession who might be expected to know how to proceed and what to consider in exercising a choice over a number of books. Even so, these professional members are frequently college presidents or professors who have no direct contact with classroom activities in the common schools

and who rarely have occasion to compare one book with another with respect to their relative value for such instructional purposes.

But this does not cover the implications of the criticism of state adopting agencies on the ground of incompetency. There is widespread belief that no group of individuals could render competent service in this capacity, first, because of the varying requirements of different types of communities within the state and, second, because the members of state boards are regularly engrossed with their official or private responsibilities and have no adequate opportunity to inform themselves either concerning the needs of the schools or the fitness of the books submitted for adoption.

#### *Teachers Often Disapprove of the Choice Made*

4. Attention is sometimes directed to the fact that a state adoption partakes of the nature of a wholesale transaction. If ill-advised action is taken by a local school board, the ill effects are not thereby widely distributed. But a mistake that has been made in a state adoption entails much more extensive damage. Again, the state adoption plan is decried because it involves far-reaching changes in the use of books whenever a new adoption occurs. It is also frequently noted that such extensive changes in schoolbooks involve heavy losses to the people in the sums paid for the books that are discarded.

5. State adoptions are also charged with responsibility for disappointment and irritation among teachers and superintendents who find it obnoxious to use unacceptable books under compulsion. The most obvious recent tendency in relation to the selection of textbooks is a growing recognition of the right of the classroom teacher to have a voice in the selection of books required by her own teaching program. The assertion is commonly made that even superior book selections cannot counterbalance the loss of enthusiasm and interest resulting from the dissatisfaction of teachers with the choices that have been forced upon them.

6. It is further argued that the state adoption scheme does not ordinarily result in the best choice being made because too much consideration always attaches to price comparisons, and the quality of the offerings, insofar as this can be adjudged, receives only secondary consideration. Mention is frequently made of the fact that publishers are induced to provide printings in cheaper paper and less substantial bindings in order that their books may have a chance for adoption. The lower prices are taken as evidence of the financial advantage of the state contract, with no serious thought of the ultimate waste due to poor construction or the pos-

sible disadvantage to the child of protracted attention to a type page that does not conform to recognized standards. Again, it is noted that publishers not infrequently refuse to submit their best offerings because price considerations in the case at hand may jeopardize a profitable market for the same books in other states.

7. State adoptions involve a period of time during which an adopted book cannot be supplanted by another. This contract period, we are told, is open to the objection that it prolongs the life of poor books that might otherwise be discarded as soon as their lack of fitness is established. It is also noted that important revisions of adopted books are sometimes brought out during the life of the adoption contract, but the contracting state does not receive the benefit of the improvement because the contract requires the continuance in use of the book originally adopted.

8. Another argument is that state uniformity stifles initiative and progress. There is no chance for gain except in the more backward areas. If the state list is better than the books in use in such areas, it is also apt to be poorer than the lists in the more progressive communities. Uniformity in general tends to produce uniform mediocrity.

9. The selection of textbooks under central authority has been characterized by certain writers as objectionable because it removes from the community a vitalizing center of interest in the school as a community enterprise. It is not essential to the concept of education as a state function that the authority of the state should be exercised in relation to details of management that can safely be left to community responsibility.

#### *Conditions in Schools Have Changed*

10. Finally, the point is made with increasing vigor and frequency that whatever force there may have been in the arguments for state adoptions in times past, there is no longer any need for or advantage in textbook uniformity on a statewide basis since practically all of the legitimate advantages sought for may now be substantially realized by other measures. It has already been noted that the price of books is no longer subject to preferential schedules under state adoption contracts, while the pleas for relief from the burdensome expense of new outfits of school books on account of change of residence, based upon exaggerated statements as they always were, are significantly less appealing in proportion to the spread of the free textbook movement.

With respect to the claim of a higher average quality of textbooks under state adoptions and the value of uniform textbooks in the maintenance of the state course of study, it is to be noted that these

contentions have never been clearly and definitely established, nor indeed are they universally approved in principle.

It is not to be wondered at that pioneer conditions impelled teachers to encourage state adoptions to avoid the disheartening confusion due to an utter lack of uniformity in the texts their pupils brought to school. It is easy to understand, too, how the bitter complaints of parents subjected to unreasonable expense from frequent changes in textbooks and exorbitant prices must inevitably have stimulated the type of remedial legislation under which the uniformity doctrine has prospered.

But the significance of a state adoption conclave in 1933 is not to be defined in terms of the conditions in which the uniform textbook idea was conceived. Such conditions do not exist in the schools today; indeed, they have not prevailed in any general way for some years past. Yet state uniformity abides as a thriving social institution, dominating a vital factor in the efficiency of twenty-five state school systems, spreading over more than half of the nation's territory and serving two-fifths of the total population.

#### *Publishers Do Not Favor State Uniformity*

A significant aspect of the situation with respect to state adoptions in recent years is the fact that the constantly recurring efforts to establish uniformity are invariably prompted by politicians and as consistently opposed by educators and educational organizations. It is a notable fact, moreover, that current writings afford no examples of pronouncements by recognized leaders of educational thought which lend support to a uniformity program. Formerly the impression prevailed that the state adoption tradition was fostered by the textbook industry. Two recently published statements by representatives of leading textbook companies are evidence that there is no longer any ground for this assumption. They are as follows:

"I look forward to the time when free textbooks will be furnished throughout the country, when there will be no state uniformity and no period of adoption, when the selection of books will be entirely in the hands of those who teach."<sup>1</sup>

"Contrary to the belief current in some quarters that the state adoption system and the state uniformity doctrine are favored and abetted by textbook publishers, the truth is just the opposite; the reputable and substantial textbook houses would welcome the immediate and complete abolition of state uniformity, state prescription, state selection and adoption."<sup>2</sup>

The evidence is that state adoptions persist in response to interests and forces which are not primarily educational. It is equally clear that the more recent efforts to extend the system have not been stimulated by the prospect of promoting any clearly recognized line of progress either in instruction or in school management. A timely contribution to the future progress of American public education could readily be provided through a nationwide scientific appraisal of state textbook adoptions.

## The Value of a Creative Art School

By CYRIL KAY-SCOTT

University of Denver School of Art

One factor that must enter largely into any reasoned and consecutive program of rebuilding the world into a place where human beings can live without constant fear of disaster, is the character of the education of the coming generation.

Education, both in the secondary and college groups, has imperceptibly and almost unconsciously taken its color from the thinking of the day. Studies that provide cultural background, stimulus and training of the imagination, and personal equipment for weighing values and broadening ideas, have given way more and more to studies that deal with the detailed application of practical information to questions of physical living.

Until this viewpoint in education is modified, educators will fail in preparing children for their future. In a changing world the greatest of all equipments is not technical fitness for an occupation that may disappear overnight because of some new labor saving invention or change in the social or financial set-up. The greatest and safest equipment is a broad background and a viewpoint that will enable the young person to adjust himself quickly and intelligently to the almost lightninglike changes of economic and political history that no doubt lie ahead.

Fortunately, many of the shrewdest financial giants and captains of industry recognize this fact and their attitude is reflected in many ways. Public schools, colleges and universities are being criticized in the press. In educational circles the opinion is expressed less often that the humanistic thought and the cultural riches of the past can well be a closed book to the university graduate or postgraduate who can just as well major in plumbing and write his thesis on the best type of water supply for boys' gymnasiums.

The progressive university will take the position that general and cultural studies figure largely in any true preparation for living. As a part of this cultural program educators cannot overestimate the value to a city of having a creative art school in its midst.

Such a school in time permeates an entire community with exactly the kind of thought, feeling, interest and viewpoint mentioned above. Everyone cannot study art, but a boy who is studying in a good art school becomes a focus of sound and fundamental thinking on art. His relations and friends get something definite from the contact.

In this day, following long neglect of cultural elements in the public schools, colleges and universities, the art school is the key institution for providing at least some children with a background that will help them to use their imaginative faculty to meet problems.

<sup>1</sup>National Society for the Study of Education, op. cit., p. 183.

<sup>2</sup>Whipple, Guy M., op. cit., p. 51.

# Cultural Training Is Acquired in the School Cafeteria

*Children learn good manners and good taste in an attractive dining room just as they learn reading and arithmetic in a well ordered classroom*

By S. M. BROWNELL, Superintendent of Schools, Grosse Pointe, Mich.

THE cafeteria has come to be a common adjunct of the modern school. It has been established to provide for growing children more adequate and more healthful lunches than can possibly be brought to school in lunch pails.

Because of the health considerations that prompted its establishment and because of the problems of business management that have resulted, it is natural that most discussions concerning school cafeterias have dealt with the health, equipment and management features. However, it is pertinent to ask, What are the cultural values of the school cafeteria? Does it or can it contribute to the training of children in matters of taste and manners?

I do not attempt to justify the existence of

school cafeterias because of their cultural values or to advocate their establishment solely on those grounds. On the other hand, I do commend to the attention of administrators the possibilities and even the responsibilities of the school cafeteria in promoting cultural training. The administrator, who gives lip service to providing a modern school to minister to the well-being and growth of the "whole child," should consciously and carefully recognize these cultural values. Parents as a rule strive to make habitual in their children certain conduct and attitudes as regards the eating of meals. Some of these habits, generally accepted in social usage, are commonly referred to as table manners. Other habits are those inseparably linked with the individual's health. The school



*Attractive surroundings are influential in promoting cultural training in the cafeteria. The open fireplace is a big asset.*



*The beamed ceiling, the paneled walls, the attractive light fixtures make this room a pleasant one.*

cafeteria offers opportunity to aid or to counteract much of this home training.

I once heard a mother remark that she approved heartily of the food served her children at the school cafeteria but that their cafeteria experience had played havoc with the careful training she had given them in relaxing and being leisurely about eating. Because of shortness of lunch hours and the general arrangement of the lunchroom, it was this mother's observation that the cafeteria must aim to teach children to "grab, gobble and git." I am afraid that her observation was an exceedingly accurate description of what actually takes place in many school cafeterias.

Training in culture is no more accomplished by chance than is training in reading. Long ago educators learned that if an effective job is to be done in the teaching of reading the instructor must have definite objectives in mind. Furthermore, to reach these objectives effectively it was recognized that the teacher must be provided with the necessary materials and must use the best available techniques. Let us assume that cultural training is desired as a result of cafeteria experience. Then let us consider some of the cultural objectives toward the attainment of which the school cafeteria may contribute.

I shall mention nine objectives without imply-

ing that they comprise an exhaustive list of habits and attitudes that may be influenced by the school cafeteria. Rather they are suggested as being obvious and generally accepted—those which the parents attempt to establish and which are certain to be influenced in some manner by cafeteria experience. These more desirable habits and attitudes are: (1) enjoyment of the meal, (2) ability to relax, (3) habit of taking reasonable time, (4) enjoyment of companionship during a meal, (5) ability to converse with friends while eating without annoying others, (6) ability to eat in public with reasonably good taste and manners, (7) care to avoid spilling food on table and floor, (8) respect for public property when relatively free from supervision and (9) ability to eat in public without feeling self-conscious.

#### *A Help or a Hindrance?*

If these habits and attitudes are accepted as desirable for children to develop, persons in charge of school cafeterias might well consider whether their pupils are aided or hindered by their cafeteria experience in developing these attitudes and habits and in what particulars the cafeteria situation might be altered so as to stimulate their greater development.

Some people enjoy food of almost any kind at almost any time. This is not true, however, of



*Modern serving equipment ensures quick service and gives pupils an opportunity to eat in a leisurely fashion.*

most persons, young or old. Enjoyment of a meal is likely to be decidedly affected by the presence or absence of numerous environmental factors. If pupils are to enjoy their meals, the cafeteria must provide the best possible food and serve it attractively. In addition, the dining room must be well ventilated, acoustically treated, sanitary and pleasing in appearance.

The ability to relax and the taking of reasonable time are closely connected habits and in general are probably aided or restricted by the same conditions. In a room where chairs scrape noisily

of pupils using the room and the length of time required to serve all pupils vary among schools. If much time elapses between the serving of the first and the last pupils in the line, the problem of providing wholesome activities arises. The pupils who were served first must be kept occupied until the last pupils finish eating.

In Grosse Pointe, Mich., where more than 80 per cent of the 1,600 pupils remain at school during the noon hour, a varied program is provided during the year. Intramural soft ball during good weather, dancing in the gymnasium with a pupil



*What incentive to good table manners is there for boys who have to sit on the basement corridor bench to eat their lunch?*

on a cement or a wooden floor, where a spoon dropped on a vitreous table top is heard throughout the room and where hard surfaced walls and ceiling echo and re-echo every sound, those who wish to converse and to be heard must shout and thereby redouble the din. There may be some children who can relax in such a room, some who may linger and take ample time for eating, but the environment is unfavorable. Silencers on the chair tips, battleship linoleum or asphalt tile on the floor, linoleum tops on tables and acoustical treatment of the room, all help to improve the cafeteria environment.

What is sufficient time for the noon lunch? It varies according to the individual. The number

orchestra providing music, movies in the auditorium under the direction of the pupil association, intramural swimming meets and basketball games in season and other carefully planned activities provide at different times interesting recreation for pupils who have finished their lunch. One difficulty arises, however. Sometimes the activities are so interesting that pupils rush through their lunch in order to spend all possible time participating in the games.

A third condition that does much to aid or to discourage taking sufficient time to eat is the adequacy of equipment. Few persons with consideration for others can sit relaxed and eat their lunch in a leisurely fashion under the gaze of onlookers

whose manner plainly indicates that the place at the table will be greatly appreciated at the earliest possible moment.

Schools as a rule need to give little attention to furthering the enjoyment of companionship during a meal. However, opportunity does arise to train pupils to enjoy companionship without annoying others and to aid the development of reasonably good manners when eating in public. Organization of the dining room so that there is minimum necessity for pupils to break through the serving line to secure a drink, to get eating utensils or to return dishes removes opportunities for physical contacts that often result in trippings, pushing, back slapping or other unnecessary noise and confusion. Acoustical treatment assists materially to reduce noise and to make it unnecessary for pupils to raise their voices to converse. The one who does raise his voice or makes other unnecessary noise is made conspicuous and is thus subjected to public notice and social disapproval.

#### *Attractive Eating Room Encourages Tidiness*

Little need be said about care to avoid spilling food on tables and floor. While this is a problem in the elementary school cafeteria, it should require very little attention in the high school. The degree to which it is a problem, however, depends largely upon the attractiveness of the room and the organization of the cafeteria supervision.

What incentive to tidiness is there for boys who have to sit on the basement corridor bench to eat their lunch, faced by an ugly waste hamper, like the group in the accompanying illustration? Why should they not take a pot shot at the basket with the egg shells, orange peels and paper wrappings? And what harm if the missiles do fall short of the mark? Could one expect boys, girls or adults to take much pride in keeping such a place tidy? On the other hand, anyone with a minimum of home background may be appealed to to use reasonable diligence to prevent food scraps and lunch wrappings from remaining on tables or floor in an attractive cafeteria.

In a reasonably attractive cafeteria it is comparatively easy to develop in pupils a sentiment of pride and respect for the room and equipment, so that rigid faculty supervision becomes unnecessary. In fact, the well planned and efficiently managed high school cafeteria offers a splendid opportunity for pupil cooperation through placing a large share of the responsibility for its supervision in the hands of the pupils. In the Grosse Pointe high school, where more than 1,200 pupils daily eat their lunch during two periods, supervision is carried on entirely by pupils. The fac-

ulty lunchroom, used by practically all faculty members, is separated from the large dining room for pupils. The building has been used for five years. During all this time the cafeteria has been pupil supervised and the room and equipment are still in excellent condition.

Finally, the experience acquired in the school cafeteria prepares the child so that he can eat in public without feeling self-conscious. This training in the cafeteria provides a type of experience which many parents would be unable to give their children except on rare occasions. In some elementary schools or in small schools training in formal table manners may be carried further by providing a table assignment with pupils as hosts or hostesses. Pupils take turns at various jobs such as providing milk and straws, placing napkins at places, clearing up and performing similar tasks.

The high school equipped with an attractive cafeteria also offers formal training in good manners and good taste by means of formal banquets which can be served with less expense in the school than at hotels.

Another important consideration is the cafeteria staff. Workers who understand the purpose of a school cafeteria—who are interested in the children as well as in the pay check—are absolutely essential in conducting a well ordered cafeteria.

## Auxiliary Rooms Are Common in High School Libraries

In analyzing the facilities of the secondary school library, the report of the National Survey of Secondary Education reveals that 330 of the 390 schools studied have separate rooms for their library. In 29 schools the library is housed in the assembly hall and in 15 it is in a corridor. Housing of school libraries is not limited to reading and book rooms. The librarians of 129 schools have work rooms; 46 schools have conference rooms; 31 report having library classrooms, and 18 have rooms for visual instruction. Most librarians do not approve of having the library and study hall combined.

However, the opinions of the librarians in this respect are comparatively evenly divided. Twenty-two of the fifty librarians and teacher-librarians in the selected schools having the combination plan state that they like this arrangement. Principals are, in general, satisfied with the arrangement which combines the library and the study hall. Having the library and study hall separate and having them connected by a door meets the general approval of teacher-librarians, principals and librarians. Under the combination plan it was found that 85 per cent of the pupils went to the library on a typical day whereas in those schools separating the library and study hall only 41 per cent of the pupils went to the library. Pupils appear to avail themselves of every type of library activity under the combination plan.

# State Responsibility in Financing the Public Schools

By IVAN R. WATERMAN

California State Department of Education

**P**ROBLEMS of school support are among the most urgent now facing education. The economic situation has exposed and accentuated existing inadequacies in methods of school support, and has accelerated the need for their solution. Inequitable systems of taxation impose unjust burdens on certain forms of wealth. Real property is particularly overtaxed. A breakdown of present tax systems looms in the future.

The apportionment of state school funds on a basis that neglects to take account of local financial status is entirely inadequate. The solution of present difficulties involves the development of equitable systems of state taxation and state school apportionment to equalize educational opportunities and school tax burdens.

Education is a state function. This long established principle is basic in state school administration and has been upheld upon numerous occasions by state supreme court decisions. The full acceptance of this principle places two major obligations upon the state.

First, the state in fulfilling its function must guarantee satisfactory and equal educational opportunities to all the children of the state. This involves the necessary state organization, administration, supervision and control to ensure the maintenance of school programs in accordance with state standards of adequacy.

Second, the state in accepting responsibility for the function of education must assume financial obligations. It must support or make provision for the support of the school system. If the state merely provides for school support by requiring local taxation, or by supplementing local effort

A brief treatment of several common types of tax inequalities is presented. The data used for purposes of illustration are taken from California, one of the fourteen states that do not apportion state school funds on an equalization basis. The courts have ruled that education is a state function. This means that the state must guarantee adequate educational opportunities and necessary funds

through state apportionments on a basis that neglects local financial ability, it falls far short of fulfilling its function. Full acceptance of the principle that education is a state function demands either complete state support of a state minimum educational program of education or a system for the apportionment of state school funds which will at the same time guarantee equal educational opportunities and equality of local taxation for the support of schools.

All of the forty-eight states have recognized the first of these obligations by establishing requirements of one sort and another for the maintenance of certain minimum standards; thirty-four states have in varying degrees recognized the second obligation by apportioning state school funds on an equalization basis or by providing nearly complete state support for schools.

## *The Purpose of State Aid*

It follows as a corollary of the principle that education is a state function that state aid for education should be used for the purpose of equalizing educational opportunities and school tax burdens. This position is generally maintained by authorities in the field of school finance, although Updegraff<sup>1</sup> favors distribution of state aid for the purpose of rewarding local effort. Strayer and Haig<sup>2</sup> have clearly demonstrated that these two purposes are in conflict.

When state aid is distributed to school districts

<sup>1</sup>Updegraff, Harlan, *Financial Support, in Rural Survey of New York State*, pp. 110-118, Wm. F. Fell Co., Philadelphia, 1922.

<sup>2</sup>Strayer, George D., and Haig, Robert Murray, *The Financing of Education in the State of New York*, Vol. I, p. 174, The Macmillan Company, New York City, 1923.

solely on a per pupil basis or a per teacher basis, or a combination of the two, the remainder of the burden of school support rests unequally upon local fiscal units and causes enormous differences in local rates of taxation for school purposes. Wealthy communities are able to support excellent schools with relatively low tax rates while poor communities must bear excessively high tax burdens for the support of inadequate schools. Only when local ability to support education is made a basis for apportioning state school funds may the two democratic principles of equality of educational opportunity and equality of taxation be realized.

### *Inequalities*

Numerous inequalities in educational opportunities offered and in taxes levied for school support exist in nearly every state in the Union. Even in the thirty-four states that apportion state school funds on an equalization basis there is evidence of unequal educational offerings and school tax burdens among local units. A brief treatment of several common types of inequalities is presented here. The data used are taken from California, one of the fourteen states that do not apportion state school funds on an equalization basis.

One of the major inequalities in present systems of school support is the excessive tax burden imposed upon real and personal property. In California 76 per cent of the revenues for all governmental purposes, state, county, municipal and district, are derived from real and personal property taxes.<sup>1</sup> The property tax in California is

predominantly a tax on real estate since approximately 87 per cent of the total assessed value of all taxable property is in the form of real estate.<sup>2</sup>

The burden of school support falls even more heavily on property. Elementary and high school district revenues in California for the year 1929-30 were derived from several sources as follows:

Source	Per Cent of Total Revenue
Federal government .....	0.3
State .....	14.7
County .....	21.8
District .....	63.2

The receipts from counties and school districts, constituting 85 per cent of the total receipts, were derived from property taxes. The receipts from the state were derived in the main from state taxes on gross receipts of corporations.

Careful investigation<sup>1</sup> has shown that income from real property in California constitutes 28 per cent of the total annual income earned in the state, and may therefore be said to constitute 28 per cent of the productive wealth of the state. When this fact is considered together with the fact that 76 per cent of the total cost of government and 85 per cent of the total cost of elementary and high school education falls on real and personal property, it becomes evident that the property tax is excessively high in proportion to the income producing value of property as compared with the income earned from other sources.

### *Present System Is Dangerous*

Further evidence of the disproportionate tax burden placed on property is found in a comparison of the tax rates on property with the tax rates on other forms of wealth. State taxation of corporations in California is based on the assumption that the rates levied on the gross receipts of corporations shall be equivalent in burden to the rates levied on property for local governmental purposes. In practice the average tax on property in California (1929-30) was \$1.757 per \$100 true value; state taxes on the gross receipts basis proved to be equal to \$1.466 per true value of property.<sup>2</sup>

Present inequitable tax systems constitute a grave menace. Support of government cannot continue to be derived in such large part from taxation on real property. It is particularly important that the support of so important a governmental function as education should not rest so heavily on so insecure a source of taxation. In those states in which the major portion of school revenues are derived locally from real estate taxes, many com-

TABLE I—DISTRIBUTION OF CALIFORNIA COUNTIES ON BASIS OF ASSESSED VALUATION PER UNIT OF AVERAGE DAILY ATTENDANCE IN ELEMENTARY SCHOOLS<sup>1</sup> AND HIGH SCHOOLS,<sup>2</sup> 1929-30.

Assessed Valuation per Unit of A.D.A.	Counties Distributed on Basis of Assessed Valuation per Unit of A.D.A. in Elementary Schools <sup>1</sup>	Counties Distributed on Basis of Assessed Valuation per Unit of A.D.A. in High Schools <sup>2</sup>
\$65,000 to \$69,999	..	1
60,000 to 64,999	..	2
55,000 to 59,999	..	1
50,000 to 55,999	..	1
45,000 to 49,999	..	..
40,000 to 44,999	..	5
35,000 to 39,999	..	5
30,000 to 34,999	1	5
25,000 to 29,999	2	8
20,000 to 24,999	..	15
15,000 to 19,999	2	11
10,000 to 14,999	15	2
5,000 to 9,999	36	..
0 to 4,999	2	..
Total Range	58 \$4,615 to \$33,934	56 <sup>3</sup> \$10,616 to \$65,259

<sup>1</sup>Also includes pupils in Grades 7 and 8 of junior high schools.

<sup>2</sup>Also includes pupils in Grades 9 and 10 of junior high schools.

<sup>3</sup>Two counties not included since no high schools are maintained in these counties.

<sup>1</sup>Ellsworth, Von T., *The Farm Bureau Monthly*, October, 1931.

<sup>2</sup>Report of the California State Board of Equalization, 1929-30.

munities have already found it impossible to maintain adequate schools. Rural education in particular has suffered greatly. In states with inadequate systems of state aid and without provision for equalization apportionments, disaster threatens rural schools.

#### *Inequalities in Local Ability*

Studies of the relative ability of local school units to support education reveal enormous inequalities. This is true of every state in the Union. Differences among counties in California in ability to support education are well illustrated by Table I in which is presented a frequency distribution of the assessed valuation per pupil in average daily attendance in elementary schools in the various counties.<sup>1</sup> On the basis of this measure of ability, it will be seen that the wealthiest county is more than six times as able to support education as the poorest county. When school districts are compared in ability to support education the inequalities are even greater than among the counties, since within each county there are vast differences of wealth among districts.

Another measure of ability to support education is the tax rate required to raise a given amount per pupil in average daily attendance. The California Constitution requires counties to levy a tax rate sufficient to provide not less than \$30 per unit of A. D. A. in elementary schools and not less than \$60 per unit of A. D. A. in high schools. Frequency distributions of the California counties on the basis of true tax rates required to raise these amounts are presented in Table II. True tax rates are expressed in terms of rate per \$100 true valuation of property. True valuation is reported by the California State Board of Equalization.

Differences are enormous in local tax rates levied for school support. Comparisons of true tax rates levied in California counties for support of elementary schools and high schools are shown in the form of frequency distributions in Table III.

Inequalities in school district tax rates are even greater. Table IV presents frequency distributions of California elementary school districts and high school districts according to the tax rates levied for school support.

A comparison of the educational opportunities offered by different communities may be offered through a comparison of the costs involved. Inequalities in school programs among California school districts are illustrated in Tables V and VI in which are presented distributions of elementary and high school districts according to the per pupil cost for education. Since per pupil cost is greatly

influenced by the size of the school, the smaller school districts have been excluded from these distributions. It was found that per pupil costs for elementary schools were not influenced by the size of the district in districts with 129 or more units of A. D. A. Only these districts are included in Table VI. Costs in high school districts in California are dependent not only on the size of the district but also on whether or not junior high schools or junior colleges are maintained. The

TABLE II—DISTRIBUTION OF CALIFORNIA COUNTIES ON BASIS OF TRUE RATE OF COUNTY TAX REQUIRED TO RAISE \$30 PER UNIT OF A.D.A. IN ELEMENTARY SCHOOLS AND \$60 PER UNIT OF A.D.A. IN HIGH SCHOOLS, 1929-30

True Rate of County Tax	Number of Counties Levying Rate as Elementary School Tax	Number of Counties Levying Rate as High School Tax
.31 to .33	1	0
.28 to .30	2	1
.25 to .27	0	0
.22 to .24	5	0
.19 to .21	8	0
.16 to .18	14	3
.13 to .16	11	17
.10 to .12	9	14
.07 to .09	5	14
.04 to .06	3	7
Total Range	58 .05 to .31	56 <sup>1</sup> .04 to .30

<sup>1</sup>Two counties not included since no high schools are maintained in these counties.

decrease in per pupil cost with increased attendance was found to be slight in districts with 250 or more units of A. D. A. In Table VII, therefore, are included those high school districts with an A. D. A. of 250 or more in which neither junior high schools nor junior colleges are being maintained at this time.

#### *Need for Revised Systems of Support*

The evidence of inequalities in tax burdens placed upon real estate as against other sources of revenue, in ability of communities to support education, in tax burdens borne by local fiscal units and in educational opportunities offered, is staggering. Inequalities comparable to those in California may be shown to exist in each of the states that fails to recognize local ability as a basis for distribution of state aid. Lesser inequalities exist in other states.

The theory of state support for education demands equalization of educational opportunities and school tax burdens to the extent that each school district is enabled to provide what the state considers to be an adequate educational program with an expenditure of local effort in terms of taxation that will be equal in each local fiscal unit. The accomplishment of such a program through the apportionment of state school funds involves

<sup>1</sup>The data of Tables I to IV are computed from statistics presented in the biennial report of the California State Department of Education for the school years ending June 30, 1929, and June 30, 1930.

three procedures: (1) determination of the cost of an acceptable educational program; (2) establishment of a uniform rate of local taxation as the contribution of local fiscal units to the cost of the state program; (3) apportionment of an equalization fund to meet the difference between the cost of an acceptable educational program and the proceeds of the uniform local tax rate in local fiscal units.

#### *Cost of an Acceptable Program*

The cost of an acceptable educational program must be determined in the light of what the people of a state are willing and able to provide for education. The average cost of education in a state reflects the consensus as to what the people of a state consider as acceptable and provides an objective measure that may be utilized in an equalization plan. The average cost of education, therefore, may well be considered as the extent to which educational opportunities and school tax burdens should be equalized.

The cost of education depends on many factors. Two of the most influential are size of school and grade level. Large schools may operate with smaller unit costs than small schools. Junior high schools and high schools require higher unit costs than elementary schools. The unit costs to be used in formulating standards for the cost of an acceptable educational program must consider these differences. Statewide averages of per pupil costs or per teacher costs are entirely inadequate. All of the factors contributing to the cost of education should be included in expressing the average cost of education. This is absolutely essential if the acceptable education program is to represent equal

TABLE III—DISTRIBUTION OF CALIFORNIA COUNTIES ON BASIS OF TRUE RATES OF COUNTY TAX LEVIED FOR ELEMENTARY SCHOOLS AND FOR HIGH SCHOOLS, 1929-30

True Rate of County Tax	Number of Counties Levying Rate of Elementary School Tax	Number of Counties Levying Rate of High School Tax
.38 to .42	1	0
.37 to .39	0	0
.34 to .36	0	1
.31 to .33	1	1
.28 to .30	5	1
.25 to .27	3	2
.22 to .24	6	3
.19 to .21	11	4
.16 to .18	13	7
.13 to .15	11	7
.10 to .12	3	15
.07 to .09	2	9
.04 to .06	1	6
Total Range	57 <sup>1</sup> .06 to .40	56 <sup>2</sup> .04 to .34

<sup>1</sup>One of the fifty-eight counties derives its entire revenues for the county elementary school from the U. S. Forest Reserve Fund and levies no tax for this purpose.

<sup>2</sup>Two counties not included since no high schools are maintained in these counties.

TABLE IV—DISTRIBUTION OF CALIFORNIA ELEMENTARY AND HIGH SCHOOL DISTRICTS ON BASIS OF TAX RATES<sup>1</sup> LEVIED, 1929-30

Rate of Elementary School District Tax	Number of Districts Levying	Rate of High School District Tax	Number of Districts Levying
Over .70	21		
.60 to .69	5	.81 to .90	5
.50 to .59	5	.76 to .80	1
.40 to .49	7	.71 to .75	118
.30 to .39	27	.61 to .70	53
.20 to .29	1,332	.51 to .60	48
.10 to .19	392	.41 to .50	36
.01 to .09	326	.31 to .40	14
None	1,074	.30 or less	12
Total	3,189		287

<sup>1</sup>Elementary rate tabulated is for maintenance purposes only; high school rate includes taxes levied for building purposes.

educational opportunities throughout the state.

Mort<sup>1</sup> has developed "weighted pupil" and "typical teacher" standards to provide for the necessary differences of cost between schools of varying size and between elementary and high school education. I have developed a technique for including these differences in expressions for measuring the cost of an acceptable educational program in terms of necessary teachers and average daily attendance.<sup>2</sup>

#### *Other Factors Affecting Cost*

In addition to the two cost factors previously mentioned, there are many other important factors affecting the cost of education which must be included in the cost of an acceptable educational program if the result is to approach equality of educational opportunity.

The cost of pupil transportation is one of the most important. Variation in the cost of living between different communities also must be considered if the cost of an acceptable program is to provide for teachers' salaries which are equivalent in different communities in terms of buying power. Other factors to be included in arriving at the cost of an acceptable educational program involve the different unit costs for various types of education and special educational services. Unit costs for such types of education as vocational education, continuation education, adult education and the various types of special schools should be included. In addition to transportation, special services such as pupil health and recreation should be considered.

It is possible to develop measures that will include all factors contributing to school costs. The degree of equalization of educational opportunity will depend on the extent to which these cost fac-

<sup>1</sup>Mort, Paul R., *The Measurement of Educational Need*, Bureau of Publications, Teachers College, Columbia University, 1924.

<sup>2</sup>Waterman, Ivan R., *Equalization of the Burden of Support for Education*, University of California Press, 1932.

tors are included in the cost of an acceptable educational program. Less refined methods for expressing the cost of an acceptable educational program limit the extent to which complete equalization of educational opportunity may be achieved. From the standpoint of immediate practical application, however, a measure that includes size of school, grade level and cost of pupil transportation goes a long way toward expressing educational need.

### *Uniform Local Tax Rate*

Equalization of the burden of school support means that all school districts should be enabled to offer adequate educational programs with equal local tax rates. The uniform rate of tax levy should be fixed at a point not higher than that required in the most wealthy district in the state to support the acceptable educational program.

Two conditions operate to limit the extent to which it is possible to achieve this result. The first is the extreme range of local ability to support education. Wealthy districts have many times the ability of impoverished districts. Application of the low tax rate required in the wealthiest districts to all the districts in a state would yield a small proportion of the total amount necessary to support the acceptable educational program for the state. As a result, the amount required from state sources would constitute a large percentage of the total cost, and in some states where the difference of ability between districts is extremely large, almost complete state support might be required. This would be extremely difficult to accomplish.

The second limiting condition is found in present methods of state support. The wealthiest districts under apportionment plans already receive state contributions for school support. Their own

TABLE VI—DISTRIBUTION<sup>1</sup> OF CALIFORNIA HIGH SCHOOL DISTRICTS<sup>2</sup> ON THE BASIS OF CURRENT EXPENDITURES PER UNIT OF AVERAGE DAILY ATTENDANCE, 1927-28

<i>Current Expenditures per Pupil in A.D.A.</i>	<i>Number of Districts</i>
\$125.00 to \$149.99.....	1
150.00 to 174.99.....	8
175.00 to 199.99.....	19
200.00 to 224.99.....	29
225.00 to 249.99.....	19
250.00 to 274.99.....	8
275.00 to 299.99.....	3
300.00 to 324.99.....	3
<b>Total</b>	<b>90</b>

<sup>1</sup>Waterman, Ivan R., *Equalization of the Burden of Support for Education*, pp. 320-21, University of California Press, 1932.

<sup>2</sup>Includes all high school districts with 250 or more units of average daily attendance in which no junior high schools or junior colleges are maintained.

local contribution requires extremely low rates. Any plan that would deprive a district of any portion of the amount which it is accustomed to receive would meet with considerable opposition from these districts. Consequently, if these districts were to continue to receive the same amount of state aid, complete equalization would need to be based on the extremely low rate required of rich districts under existing apportionment practices. The result, as before, would involve the state in supplying a large percentage of the total support, or in nearly complete state support.

In actual practice, therefore, it is advisable to fix a local tax rate somewhat higher than that required of the wealthiest districts. The total amount which the state may be expected to contribute usually is a major factor in determining the rate required of local districts for participation in a state school equalization fund. Such a procedure fails of complete equalization to the extent to which the wealthy districts are enabled to support their educational program with a lower rate of taxation than that fixed for the districts which would receive equalization apportionments.

### *Apportionment of State Funds*

The distribution of state school funds on an equalization basis consists simply of apportioning to each local fiscal unit the difference between the cost of an acceptable educational program and the proceeds of the uniform local tax levy. Under plans whereby the state distributes a portion of the state school funds on a per teacher or per pupil basis, or on some other basis which neglects local ability, the above procedure would be modified slightly. In such cases, the part of the state funds distributed on an equalization basis would be apportioned to local units to meet the difference between the cost of an acceptable educational program and the sum of other state apportionments plus the proceeds of a uniform local tax levy.

TABLE V—DISTRIBUTION<sup>1</sup> OF CALIFORNIA ELEMENTARY SCHOOL DISTRICTS<sup>2</sup> ON THE BASIS OF CURRENT EXPENDITURES PER UNIT OF AVERAGE DAILY ATTENDANCE, 1927-28

<i>Current Expenditures per Pupil in A.D.A.</i>	<i>Number of Districts</i>
\$160.00 to \$169.99.....	1
150.00 to 159.99.....	2
140.00 to 149.99.....	1
130.00 to 139.99.....	2
120.00 to 129.99.....	4
110.00 to 119.99.....	8
100.00 to 109.99.....	12
90.00 to 99.99.....	30
80.00 to 89.99.....	89
70.00 to 79.99.....	120
60.00 to 69.99.....	91
50.00 to 59.99.....	20
40.00 to 49.99.....	2
<b>Total</b>	<b>382</b>

<sup>1</sup>Waterman, Ivan R., *Equalization of the Burden of Support for Education*, pp. 311-12, University of California Press, 1932.

<sup>2</sup>Includes all elementary districts with 129 or more units of average daily attendance and employing five or more teachers.

# Constructive School Legislation Enacted in 1933

By M. M. CHAMBERS, Ohio State University

THERE was widespread fear as to how public schools would fare at the hands of the legislatures of 1933 as the result of almost four years of continuous financial dislocation. Now that the smoke of legislative battles has cleared away, it is obvious that the general situation is not a cheerful one.

Despite the breakdown of antiquated taxing systems, little progress has been made in providing new sources of revenue for schools. Reduction of appropriations to state supported schools and great reluctance to aid hard pressed local districts to an extent commensurate with their needs, have been the general rule. In some instances gestures have been made to relieve local districts at the expense of the teachers, by reducing the minimum salaries to shameful levels. A large number of teachers have not received pay for services rendered months ago, and many schools in several states are actually closed for want of funds.

However, several new laws were passed by the 1933 legislatures that are of a constructive nature. Included in this new legislation are encouraging examples of laws that provide new sources of revenue, that maintain appropriations at accustomed levels, that allow needed expansion of facilities, that establish improved state and county organization and that provide for improvement in educational personnel administration. Several of the outstanding new laws were summarized in the article, "Flashes of 1933 School Legislation," which appeared in the August number of *The NATION'S SCHOOLS*.

Oklahoma enacted an income tax law which, it is estimated, will produce \$5,000,000 annual revenue, 75 per cent of which will go to the schools. The law provides for corresponding reductions in

property taxes. Oklahoma also provided for heavy taxes on legalized beer, with 95 per cent of the proceeds to go to the schools. The same state passed a 1 per cent sales tax, exempting gasoline and farm produce. Ninety-seven per cent of the revenue from the sales tax will go to the schools, 17 per cent being earmarked for equalization, 30 per cent to retire unpaid teachers' salary warrants and 50 per cent to reduce property taxes.

Washington enacted an important new measure for educational equalization which does not of itself provide funds for state support of education, but contemplates the ultimate assumption by the state of one-half the cost of local schools. Washington also passed a school revenue measure that consists mainly of a comprehensive system of taxes on occupational privilege. This law is expected to yield from \$7,000,000 to \$8,000,000 annually. The state also appropriated \$20,000,000 for state support of public schools during the ensuing biennium.

South Dakota enacted a gross income tax which, it is expected, will provide \$4,000,000 annually for the local school districts. An annual poll tax of \$1, and an annual dog tax of \$1, both to be devoted to the schools, were also passed.

North Carolina appropriated \$16,000,000 for state support of local public schools for eight months, in place of the state supported six-month term provided for by the

act of 1931. County and city boards of education in North Carolina are authorized, upon the approval of the state school commission, to operate schools of a higher standard than those provided for by state support, but not to exceed a term of 180 days; and the maximum rate of the necessary supplemental levy must be determined by vote of the people in each administrative unit.

*A number of laws designed to aid the schools were adopted by the 1933 legislatures in several states. These laws provide for new sources of revenue, expansion of facilities, improved state and county organization, improvement in personnel administration and maintaining school appropriations at accustomed levels*

The state school commission is a newly created body in North Carolina, and is composed of the governor, the lieutenant governor, the state treasurer, the superintendent of public instruction, and ten other members appointed by the governor (one from each congressional district), to serve for six-year overlapping terms. It succeeds to all the powers of the old state board of equalization, which is now abolished, and has broad powers of administration over the state supported school system, including authority to determine the number of teachers to be included in the state budget for each administrative unit, and to permit children living in one district to attend school in another district without payment of tuition.

#### *Louisiana Increased Educational Appropriation*

While Wisconsin reduced many items in its state school budget, still it maintained at the 1931 level the appropriations for the vocational schools, for the school for the deaf and the blind, for the education of crippled children and for state aid for district and union high schools. However, the emergency board has been given the authority to reduce these appropriations by as much as 24 per cent.

Delaware appropriated \$4,500 to continue the service bureau for foreign born residents, and \$1,500 a year until 1942 to continue assistance in the education of children of World War veterans who died in the service. Massachusetts appropriated the amounts asked by the state department of education for the maintenance of Massachusetts State College, the teachers' colleges, the textile schools and the nautical school. New Jersey provided for immediate payment to school districts of their proportion of state school monies, regardless of delinquencies in payment of the state taxes from which the funds are derived. Louisiana made an additional appropriation of \$1,500,000 for public education.

#### *Junior High Schools Legalized in Washington*

New York established a division of child development and parental education in the state department of education, and appropriated \$16,000 for its operation. Iowa provided that local boards of education may establish a kindergarten when petitioned by the parents or guardians of twenty-five or more children of kindergarten age. Washington enacted a bill sponsored by the state department of education, legalizing kindergartens and junior high schools.

Rhode Island made a special appropriation for physical improvement of the property of Rhode Island State College. New York reappropriated an unexpended balance of \$154,000 for building

and improvement at the State School of Clay-Working and Ceramics, at Alfred University. Utah established a state junior college at St. George City, by taking over the property of Dixie College, a private institution, without cost to the state.

Delaware appropriated \$1,500,000 to the city of Wilmington and \$1,000,000 to the remainder of the state for school building purposes. New York empowered city boards of education to authorize, conduct and maintain such extracurricular activities in the school as they shall from time to time deem proper.

New York directed the state department of education to survey each county prior to April 1, 1936, to determine whether its educational interests can be adequately served by a lesser number of supervisory districts; and authorized the department to order the discontinuance of any supervisory district in which a vacancy occurs in the office of the district superintendent, if it deems the continuance of the district unnecessary. This seems to be a commendable step which should result in larger administrative units.

#### *Alaska School System Reorganized*

California removed the control of the state teachers' college fund from the director of finance and placed it in the hands of the director of education (superintendent of public instruction). This step is in harmony with the theory that educational funds should be administered by educational authorities, rather than by noneducational officers whose main interests are elsewhere and who cannot be expected to be familiar with educational administration.

Georgia enacted a law directing that after June 30, 1933, all appropriations made to any or all institutional units in the university system shall be paid to the regents of the university system in a lump sum, and be allocated among the institutions by the regents. This is another example of entrusting the control of educational funds to a strictly educational authority. This act is an aftermath of the Georgia legislation of 1931, which created the regents of the university system to govern all state institutions of higher and secondary education, with the exception of locally supported high schools.

North Carolina created the state school commission, with large powers of control over local schools, as already described. Alaska reorganized its department of education in harmony with the best current theory, by creating a territorial board of education. This board is composed of five members who are appointed by the governor, with the consent of both houses of the legislature, for six-year terms. This board appoints the commissioner

of education. Since 1929 the commissioner had been elected by the people. Previous to 1929 he was appointed by a board of education of the antiquated ex officio type, composed of the governor and the four senior senators. The new law gives Alaska a territorial board of education without ex officio members, and invests the board of education with the complete authority to control the territorial schools.

#### *New Laws Pertaining to Teachers*

Delaware enacted a statute requiring boards of education to notify any superintendent or teacher by March 15 if he is not to be retained for the next school year, specifying for what reasons he is being dropped. New Jersey prohibited discrimination in the rate of salary reductions as between municipal employees and school employees. Louisiana raised the standards for the certification of teachers.

Illinois directed that religious affiliation shall not be made a qualification or disqualification for employment of a teacher, and provided penalties for violation of this provision. A similar measure was enacted in New York in 1932, and has since been proposed in several states. Illinois also increased the state contribution to the teachers' pension fund from 1/10 of a mill to 3/20 of a mill on each dollar of assessed valuation, and doubled the teachers' contribution to the fund.

#### *Progress Made Despite Financial Troubles*

Pennsylvania appropriated the full amount required for normal maintenance of the school employees' retirement fund. Rhode Island revamped its law providing for a teachers' retirement fund in the city of Newport, and amended the law providing for a similar system in the city of Bristol, so as to prevent the forfeiture of pension rights by women teachers who marry. North Carolina's new school law specifies that in the employment of teachers "no rule shall be made or enforced on the ground of marriage or nonmarriage."

Thus even in what has probably been the darkest year of the economic depression, here and there advances have been made toward raising the status of the teaching profession to the dignity appropriate to a great public service.

Likewise, some progress has been made in the direction of modernized state systems of school support and better school administrative organization. Despite unprecedented financial stringency, evidence of recognition of the need for expanded school services has not been entirely absent. These wholesome tendencies may be expected to be greatly accelerated in the legislative sessions of 1934 and 1935.

## Educational Contributions of Dr. Joseph Ray

A study of the life of Dr. Joseph Ray<sup>1</sup> shows clearly how little has been written concerning Doctor Ray's achievements as an educator and author and emphasizes the importance of evaluating his influence in the progress of education in a democracy.

Doctor Ray was a popular author of arithmetics and algebras over eighty years ago.

Much of his success is attributed to the fact that he was educated in the school of poverty. He was in a large sense a self-made mathematician and a self-made teacher, and in the preparation of his books he always kept before him the particular difficulties he had experienced in mastering each topic.

After graduating from the Ohio Medical College, Doctor Ray began the practice of medicine in Cincinnati. He did not remain long in the profession. Following his inclination for mathematics he joined the faculty of Woodward High School and Woodward College as instructor of mathematics. This was the beginning of his career as a teacher and author.

His books became popular soon after their first publication in 1834 and their popularity increased for a number of years.

Ray's arithmetics, McGuffey's readers and Pinneo's grammars were in use during the period of the three R's in education. While the pupils were learning to read from McGuffey's readers, they were also learning to calculate from Ray's arithmetics. Like McGuffey's readers the use of Ray's arithmetics and algebras survived the life of their author many years. Millions of boys and girls born a quarter of a century after the death of Doctor Ray studied his arithmetics and algebras in the public schools scattered over the country.

Yet his fame transcends the subject of mathematics to the field of education in general. He with others formulated a program of education adequate for the needs not only of a pioneer country but of future generations.

As a teacher and educator, Doctor Ray ranked with William Holmes McGuffey, H. H. Barney and other leaders. It was through his influence as a master teacher that he gave direction to the forces of education in a new commonwealth.

## No Reason Here for Complaint on Cost of Education

If the cost of elementary education is estimated at \$81 a year, high school education at \$135 a year and college training at \$500 a year, the typical factory employing 300 persons is using \$305,000 worth of trained brains every day, it is pointed out by W. D. Boutwell, U. S. Office of Education.

This amount is capital just as surely as the machines the employer buys are capital, in Mr. Boutwell's opinion. If this employer is paying less than \$18,336 a year in taxes to the city, he is getting off easy, and he has no reason to complain about the cost of education in his community. The community is giving him a precious and costly gift.

<sup>1</sup>Dillon, Clarence B., *The Educational Contributions of Dr. Joseph Ray*. A thesis for the master of arts degree, Ohio State University, June, 1933.



## High School Motor Traffic Clubs Promote Safety Education

By FLORENCE NELSON, Executive Secretary, Extension Division,  
National Safety Council

**T**HE younger the driver the more frequent the accident. Among the perplexing problems of street and highway this fact stands out as a challenge to the schools.

Nothing has contributed more to the comfort and efficiency of modern life than the automobile and nothing has equaled it as an instrument of accidental death. Let us glance at its record.

Last year motor vehicle deaths in the United States numbered 29,000. While this is slightly less than the total for 1931, it may be contrasted with 23,430 in 1926 and 13,939 in 1921. The rate in 1931 was six times as high as it was in 1913. Serious as the crime situation is in this country, motor vehicle deaths are three times as numerous as homicides, although the latter receive far more widespread attention.

In addition to these fatalities we must take into account approximately 1,200,000 injuries inflicted annually by automobiles, of which approximately 100,000 are permanent in character. The wage loss, medical expense and the overhead cost of insurance in connection with 1931 fatal and non-fatal injuries in motor vehicle accidents is estimated at about \$700,000,000. That figure does not

include property damage which is difficult to estimate since accidents causing property damage alone are not recorded in most states.

Into this picture comes the young driver with a shockingly bad record. A large insurance company recently made a study of the cases of about four million operators in certain states requiring licenses. This showed that the number of drivers under the age of twenty years who are involved in personal injury accidents is 39 per cent greater than the average for all ages combined. It showed not only that young drivers are more prone to accident but also that the ratio continues about evenly up through mature life. The thirty year old driver is safer than the driver of twenty. The forty year old operator is safer than one ten years his junior. The average driver of fifty is twice as safe as the average driver of twenty.

These figures discredit the popular belief that young people are better drivers than their elders. The former undoubtedly are skillful in handling a car and quick to master the mechanical difficulties. Desire for speed and inability to use proper judgment in an unusual situation seem to account for the high accident rate.

In other words, a good driver must be able to handle his car efficiently, he must know and observe the rules of the road, he must be courteous and considerate and above all he must realize fully how great is his responsibility when he takes the wheel in his hands.

Experts in the traffic field agree that two general lines of attack must be followed if the number of fatalities and injuries chargeable to youth are to be reduced. First, the enactment and enforcement of laws relating to minors and automobiles must be ensured; second, young people must be exposed to the sort of education that will result in a proper attitude toward driving and the demands of highway safety.

#### *Young Drivers Are Often Poorly Trained*

Laws relating to junior operators show wide variation. In some states licenses may be obtained at the age of fourteen; in others the minimum age is sixteen. In states where there is no driver's license law mere children may drive cars. New York State permits young people to drive at sixteen except in New York City where the legal age is eighteen.

The problem of educating the young driver is enormously complicated by the haphazard way in which he usually receives his instruction. Frequently some member of the family teaches him. If his parents happen to be conscientious, law-abiding citizens who will take time to instill in their child a sense of responsibility as well as a thorough knowledge of the mechanical factors and the rules of the road, all is well. But too often boys and girls acquire the knack of handling a car in a few casual lessons. Parents are pleased at this facility and fail to consider whether the child's judgment can be relied upon or whether he is thoroughly grounded in rules of highway safety. Many fathers and mothers are quite willing to allow their children to apply for a driver's license before they are eligible so long as they can deceive the authorities about their age.

Some ten years ago elementary schools began to realize that parents needed a helping hand in the matter of training children in safety habits. Educators could no longer shut their eyes to the appalling number of young lives that were being sacrificed in accidents. They instituted programs of safety education with the amazing result that 7,000 child lives are being saved each year. What is more logical than that junior and senior high schools should now assume responsibility for this major accident problem of the teen age? Why not offer the mechanical training and character education that students of traffic problems have found to be essential?

Within the past year a number of cities have been experimenting with this idea and there have been some interesting and significant results, notably the widespread development of the High School Motor Traffic Club. In most cases this is an integral part of the activities program of the school. It recognizes, however, that high school psychology is impatient of formal instruction and especially of admonitions to be careful, though eager to explore new fields of knowledge and experience. The child education section of the National Safety Council has recently prepared a pamphlet giving a suggested program for such a motor traffic club. The plan, outlined briefly, is as follows:

Membership in the club is voluntary. If it is necessary to limit the size, pupils should be admitted in the following order: (1) those actively participating in existing traffic safety activities in and about the school; (2) those legally driving cars; (3) those of legal driving age who expect to start driving within a short time; (4) pupils approaching the age when they will apply for a driver's license; (5) other interested pupils.

The club elects officers and appoints committees as needed. Meetings are held during the regular activities period in schools having such periods; otherwise they are held at some specified time during school hours or later. Standing committees for programs and publicity are recommended and special committees may be appointed at the appropriate time to consider some of the following activities: driving instruction class for beginners; tests for driver's license; automobile inspection; special interviews and reports; regulation for parking and driving by pupils; preparation for special assemblies; debates.

#### *Suggested Topics for the Club Program*

The program should involve as large an amount of pupil participation as possible. In some cases it will be necessary to bring in outside specialists. Automobile clubs, police departments, automobile industries and insurance engineers may be called upon when the help of experts is necessary. Following is an outline of suggested topics:

1. The Automobile and Its Relations to the School—regulation of the parking of pupil and faculty cars and regulation of pupil traffic before and after school.

2. Local and State Traffic Regulations and Rules of the Road.

3. Mechanics of the Automobile—a series of reports and a series of mechanical demonstrations, including the maintenance of brakes, lights, steering mechanism and other safety features.

4. Inspection and Maintenance of Motor Ve-

hicles, including the inspection of his car by each pupil driver for the following: brakes; steering mechanism; headlights; tires; such things as rear-view mirrors and windshield wipers.

5. Tests for Operator's License, such as setting up a driver's license bureau providing for eye test—defective vision, color blindness; hearing test; other physical handicaps; information test on knowledge of regulations and rules of the road.

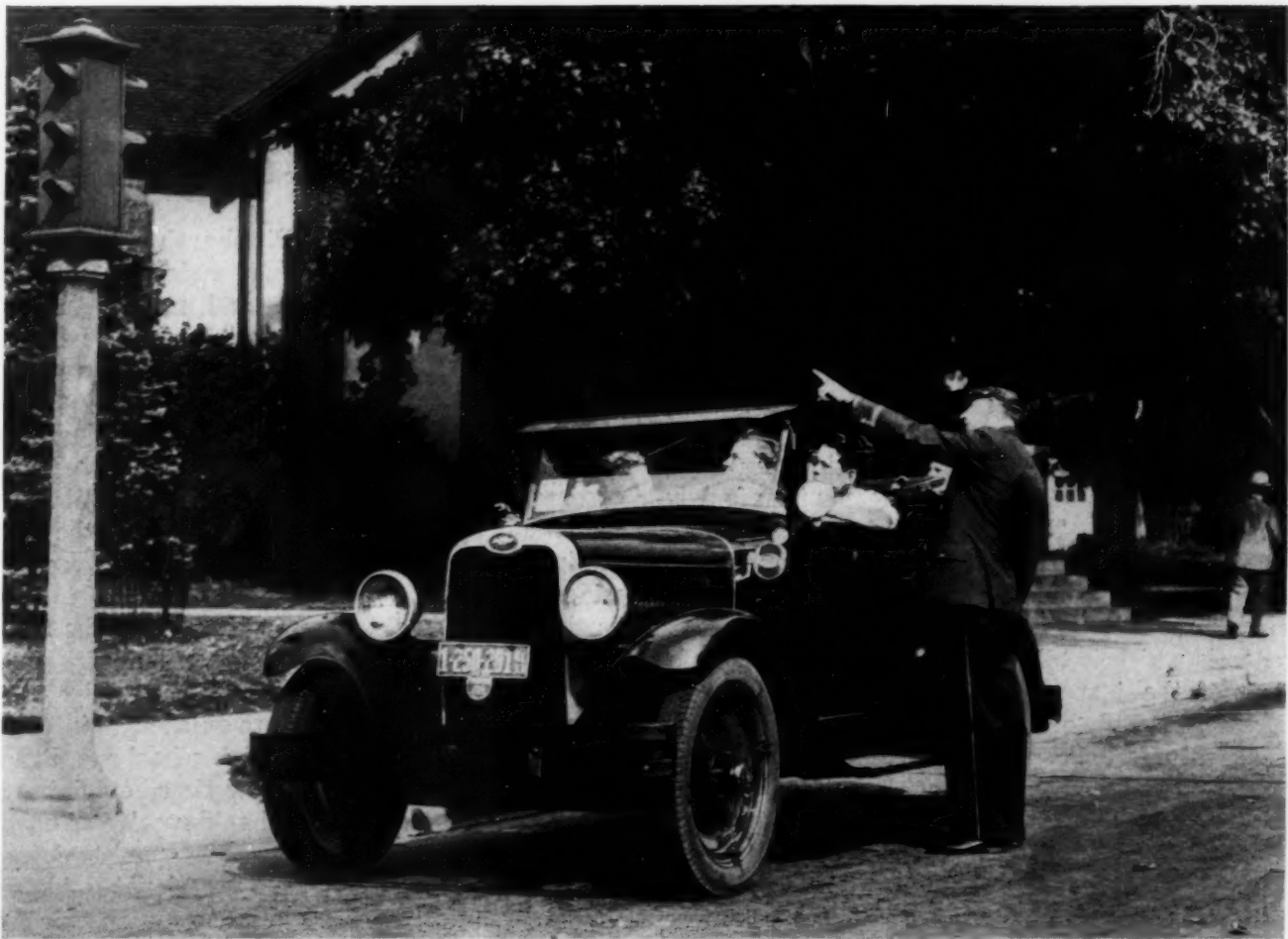
6. Specific Causes of Automobile Accidents—(a) accidents from the standpoint of the driver due to failure to conform to rules of the road; speeding; inattention; failure to recognize unfavorable driving conditions; lack of appreciation of the rights of others, and failure to slow down at intersections; (b) accidents from the standpoint of the pedestrian due to crossing between intersections; crossing at intersections against signal; playing in the street; crossing at intersections with no signal; (c) accidents due to physical and mental conditions; (d) accidents due to defective railroad grade crossings.

7. Effect of Motor Transportation on the Economic and Social Life of the Country—history of invention and growth of the automobile; economic developments including growth of highways, pro-

duction, struggle between railroads and free wheel vehicles for transportation; insurance and its effect on the driver's feeling of responsibility, liability insurance *versus* compensation insurance, compulsory insurance and financial responsibility laws; social effects, benefits to rural communities, encouragement to outdoor recreation, moral problems; growth of safety movement in America.

The work of the club is of such interest that it may well be featured in occasional public demonstrations. An open meeting to which the entire school is invited or an assembly period offers this opportunity and also provides a means of exposing all pupils to a safety lesson. Such assembly programs may include an address by a representative of the state department of motor vehicles; a play; a motion picture demonstrating use of the Red Cross first aid kit; an address on the city's traffic problem by an official of the police department; a dramatization of what actually takes place during an examination for driver's license, and examination on knowledge of driving, traffic laws and physical and moral right to receive license.

From various parts of the country come encouraging reports of the successful organization and administration of these motor traffic clubs. They



*Traffic lights are dangerous if not observed. The officer is warning against jumping the signal.*



*An overloaded car interferes with the driver's vision and makes driving hazardous.*

have captured the interest of pupils much more quickly than any other safety activity yet suggested for the high school.

Providence has an automobile club organization in every junior high school since sixteen is the legal driving age in Rhode Island. Not long ago I paid a visit to the George J. West Junior High School in that city where a meeting of the club was in progress. The speaker, a ninth grade pupil, was giving a businesslike talk on speed and braking distances, using for illustration a chart provided by the Rhode Island state board of public roads. Here was a fifteen year old girl with a knowledge of speed and stopping distances which would put to shame many an adult with years of driving experience.

Members of the Rhode Island state board of public roads and other traffic experts lecture before these Providence clubs regularly. Occasionally a motion picture is shown on the making of a motor or the making of a tire or some lesson in safe driving is featured. The road board supervises trips to the city's busiest corners, taking club members in a fleet of cars to point out driving hazards and errors made by motorists. It has also provided a chassis which is taken to the schools regularly by one of the inspectors and used to demonstrate points about the braking system and other mechanical features.

When the high school at Evanston, Ill., announced a motor drivers' instruction course, 630 pupils enrolled and another hundred were turned away. In this case the traffic club operates through a school safety council made up of representatives of the different home rooms. Every pupil of the

case problems that are referred to it. The largest of the projects is the drivers' school which lasts several weeks and includes instruction in driving as well as in other phases of safety education.

In the high school at Altoona, Pa., the activities of the large traffic club are closely associated with the popular course in auto mechanics. In addition to studying automobile engines and traffic regulations, club members endeavor to educate the entire school enrollment through the development of home room programs. The club is so large that it meets in three sections.

At Perry High School, Pittsburgh, an automobile club functions successfully under the director of extracurricular activities and another faculty member who acts as club sponsor. Membership is limited and is highly prized by the pupils.

The weakness of the high school motor traffic club as a means of educating the young driver lies in the fact that, as an extracurricular activity, it reaches a limited number of pupils. It is interesting chiefly because, as stated before, it is the first really successful safety activity that has received widespread attention from the high schools. Just as the schoolboy patrols were in a sense the forerunners of a thoroughgoing program of safety instruction in the elementary schools, so we may expect the motor traffic club to quicken an interest in the problems of pupils of high school age. Practically every pupil will at some time be driving a car. Certainly this subject should receive as much attention as health and hygiene, manual training, domestic science, swimming, vocational guidance and other subjects designed to fit young people for living in the modern world.

# Schoolhouse Construction Standards Should Be Flexible

By R. H. F. HALSEY  
Deputy Superintendent of School Buildings,  
New York City

*Standards serve as a valuable clearing house for building data. To remain valuable they must be adapted to keep pace with changing conditions and with accumulation of experience. They should never be allowed to become static, or else, like buildings, they will soon become obsolete*

IN ALL discussions of schoolhouse planning and in many books and magazine articles there is a considerable amount of reference to standards, that is, standard size and shape of classrooms; standards for widths of stairs, corridors and exits; standard ceiling heights, fenestration, orientation of furniture and equipment, and standards for artificial lighting, mechanical equipment and so on.

In discussing standards of schoolhouse planning and construction it is necessary to consider the obvious fact that the work of education carried on in schoolhouses is progressive and dynamic rather than static and that schoolhouse planning therefore must also be progressive and dynamic rather than static.

In spite of its obviousness, this fact is often ignored. Authoritative published sets of standards, recommendations or suggestions on schoolhouse planning and construction are dangerous in that they tend to dull the mind of the schoolhouse planner to the need for intensive study of the requirements of the individual program to be housed.

It is human nature to do things in the easiest way and it is far easier to follow a set of so-called standards backed by some authority than to survey accurately the housing needs of a school and develop from the results of this study a set of plans

that will meet efficiently all requirements. This condition also applies to published plans of school houses. We have all seen schoolhouses built from plans that were copied from published plans with slight modifications to fit the site and the needs of a school. Cribbing is still the besetting sin of some architects.

Looking back over the schoolhouses that have been built during the past twenty-five years, we can see considerable progress in the art of schoolhouse planning and construction. Has this progress kept pace with the progress in educational ideas and methods? I do not mean to infer that every change in method and theory of education requires a change in the schoolhouse plan. Many of them do, however, and some of them require radical changes. Therefore, standards of schoolhouse planning and construction should be mutable and should keep pace with new ideas in education and construction.

## *Many Problems in Altering Old Buildings*

In a little more than a quarter of a century of experience in schoolhouse planning and construction I have seen many changes in educational theory and practice. Many of them called for changes in existing schoolhouses and I have many times altered old school buildings in an endeavor to make them meet new needs. Schoolhouses so altered could seldom be considered anything but the best makeshift possible under the circumstances. There are many limitations in altering old buildings that even an experienced architect cannot overcome.

During the same period I have also seen many changes in structural forms and methods and in building materials. Comparison of schoolhouses built thirty years ago with those completed within the past year shows a great advance in planning and design and in the kind of materials used. We may therefore expect that the coming years will bring with them even greater changes and more advanced ideas.

I often hear people speak of the fine work of old-time architects and builders. I have had many old buildings altered and in ripping out and tearing down I have found that these so-called fine architects and builders committed many sins, both of omission and commission, that we today could not legally do even if our pride and conscience permitted.

There has been much progress in the forms of building construction and in building materials in the past quarter of a century but this progress has always had to contend with and overcome the inertia caused by the standardization of forms and materials. The introduction of successful new ideas, new forms and new materials always gives a forward impulse to building construction.

It also requires the scrapping or at least the modification of old standards. It is often difficult to introduce a new idea to people who have long been wedded to old ideas and standards.

#### *An Alibi for the Inexperienced Planner*

Wedding ourselves to a set of ideas and standards must be guarded against in the construction of schoolhouses. In progressive building, planning and construction our motto should be "off with the old love and on with the new." We must, however, always be certain of the quality and suitability of the new. Mere change is not always progress.

Standards are of decided value to the schoolhouse planner who has sufficient knowledge and experience to use them as a guide, gauge, model or comparison in connection with his knowledge of the requirements of the building. To the inexperienced or incompetent schoolhouse planner they may become a snare and a delusion. Their greatest use to him may be as a defense for a poor plan and specification.

The dangers inherent in the use of any set of authoritative standards by inexperienced or incompetent schoolhouse planners are (1) the tendency to use them without proper thought and study to be certain that they fit the needs and requirements of the school for which the building is being planned and (2) the tendency to consider them the last authoritative word on schoolhouse planning and construction without reference to the date on which they were prepared.

A properly planned schoolhouse meets the needs of the work that is to be carried on in it and provides for adjustments so that probable changes in the curriculum will not make the building unsuitable or difficult to use. Therefore, before the planning of a schoolhouse is begun the curriculum and all probable changes in it should be worked out and plotted in such a way that the planner

will have before him a definite scheme for which to work out the housing. If he is competent and experienced he will know just how far and how well standards will apply and what modifications will be required to meet the conditions imposed by the needs of the school to be housed.

There is always a temptation to force the plans of a schoolhouse around a given set of standards, particularly if authoritative standards are available. When this is done it produces schoolhouses that do not fit the needs of the school and results in school work being adjusted to the limitations of the building. It makes the schoolhouse a Procrustean bed to the consequent detriment of the educational work to be carried on.

There are, however, real and definite uses for standards in schoolhouse planning. Standards prevent inexperienced planners from producing schoolhouses that are totally inadequate and even dangerous to life, limb and health. They serve much the same purpose as a municipal building code. By using standards an inexperienced architect can produce a passable and relatively safe schoolhouse and can defend his plan by the claim that he followed authoritative standards. To the experienced schoolhouse planner standards serve chiefly as a comparative gauge and a convenient reminder or reference.

Standards serve as a valuable clearing house for data from many sources. To remain valuable they must be amended from time to time to keep pace with changing conditions and with accumulation of experience. They should never be allowed to become static. Buildings rapidly become obsolete and so will standards if they are permitted to remain static.

My plea is for progress. Do not let us settle down complacently and let our standards freeze solid. Let us continue to go forward and to test out new ideas, new methods and new materials, discarding that which is not good and keeping that which is good only until we find something that is better.

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## School Patrols Reduce Traffic Accidents

The use of school patrols in promoting safety education in the public schools has met with splendid success in Great Falls, Mont. Since the establishment of safety patrols in that city three years ago, no fatal accidents have occurred in the vicinity of the patrols.

Only one serious accident involving a school child has been reported during the last two years at the intersections where the patrols operate. This school safety work is carried on in conjunction with the Great Falls police department, which is affiliated with the National Safety Council.

# New Plan Brings Standard Schools Within Reach of All Pupils

*Extensive changes are being made in the Arkansas school system, based upon the consolidated district plan. The proposed system embraces 307 districts as compared with 4,598 in 1927-28. Already 1,752 of the various districts have been involved in consolidations*

By HOWARD A. DAWSON, State Department of Education, Little Rock; HARRY A. LITTLE, Little Rock, and CRAWFORD GREENE, Blytheville, Ark.

ONE of the most comprehensive surveys of a state educational system ever attempted has been completed recently for Arkansas under the direction of the state department of education after more than two years of work.

The primary purposes of the study were to develop a plan whereby standard elementary and high schools would be placed within reach of every child in Arkansas and to determine the cost of such a plan. In order to do this intelligently it was necessary to analyze actual school conditions and to determine the principal weak spots in the present system. After the facts had been collected an effort was made to locate the most feasible and logical areas for school organization and support. When these tentative set-ups had been made the cost of each proposed system and the amount of revenue available from present sources were determined.

The study of actual conditions prevalent in the various individual units of the Arkansas school system revealed an unusually large number of small schools requiring many more teachers than

would be necessary in large schools and ranking inferior to the larger schools in all of the educational tests applied. Wide variation in the ability of the various units to support their schools was also disclosed.

Coincident with the survey has been the development and completion of the state highway program. Arkansas now has a statewide system of roads reaching into all thickly populated portions of the state, together with good systems of lateral roads in the various counties. This condition has made the maintenance of the small school unnecessary in most cases as it is now comparatively easy to operate busses for the transportation of many previously isolated school children.

"Such facts as have been collected," states the survey, "indicate that one method of increasing the school advantages is through the consolidation of schools so as to avoid the employment of an unnecessary number of teachers, to provide better school buildings and equipment for the pupils and to offer a wider variety of opportunities through the school organizations and course of study than can be afforded in the smaller school.

"The maintenance of the small school is uneconomical from two standpoints. In the first place, if the character of the buildings and equipment, the length of term and the qualifications of the teachers were equalized throughout the state, the maintenance cost of schools accommodating fewer than forty pupils would be excessive. Per capita costs of instruction in these small schools under such conditions would be considerably larger than per capita costs in larger schools. In the second place, judging the results to be expected by the results usually obtained in small schools, the small school would not be as effective in educational results as the larger school. It is certain that the curriculum would be considerably more limited. On the whole, it is highly probable that these small schools would not produce the maximum educational results for the money spent.

"As long as the state is divided into numerous small districts there will be many that have voted the maximum tax rate and still have inadequate funds for financing the schools, while others

which vote low rates have all or more revenue than is needed. Some districts have within their borders manufacturing plants, railroads, power lines, gas lines and other valuable properties which do not necessarily belong to the district. Another district only a short distance away may not enjoy any of the proceeds of taxes levied on such property. If adequate schools are to be maintained and the children given any semblance of equality of opportunity, taxing units must be made sufficiently large to produce the revenue for the maintenance of a complete school system.

"In the matter of larger taxing units, it seems reasonable to assume that units for local taxation at least should form logical economic units. For instance, any town of 1,000 population or above in the state provides a certain type of service for a definite area around it. It is usually the center for banking, religious activities, entertainment

less to these boundaries. Other facts cited seem to indicate that these schools should be of the consolidated type and that more or less definite standards as to their size should be set up. In the equalizing fund law there is the following clause: 'It shall be the policy of the state board of education in granting aid and of the county board of education in recommending aid from the equalizing fund, to do so only after taking into consideration the relationship of the schools being considered to other schools, the number of pupils to be accommodated, the relative accessibility of the schools and the most economical organization and administration of the schools so as to give educational advantages to the largest number of pupils with the funds available.'"

Thus, in keeping with the provision of the law, the state board of education, through the division of research and surveys of the state department



and marketing of a territory within a fairly definite area. In such cases the territory is consolidated into a natural unit with common economic and social purposes. It seems entirely logical and equitable to assume that such a unit should also be a unit for the maintenance of schools and therefore a unit for taxation for the support of schools.

"The facts and conditions set forth indicate the need for determining the community boundary for school purposes and for making a plan for the establishment of schools that conform more or

of education, assumed the task of working out a countywide plan of school organization for each of the seventy-five counties of the state. The survey workers went into each county and based their investigations upon the following outline of work:

Maps of each county were made, showing the roads of different types; the streams; the locations of cities, towns and villages; the boundaries of school districts; the location of school buildings, and distribution of school population between the ages of six and seventeen years, a dot being made for each child in the quarter-section of land on which he lived.

Centers of population were determined by a study of roads, distances and distribution of population. A plan was made for the disposition of all present schools. The location of school buildings was determined and the school which each group of children was to attend was indicated.

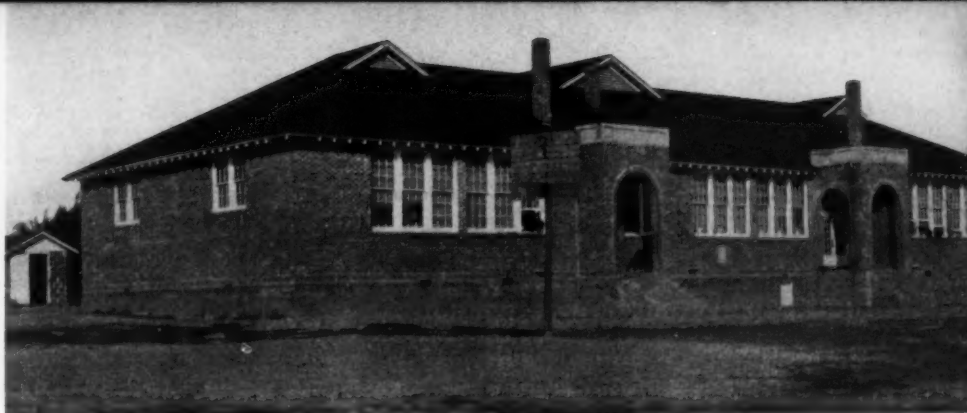
The size and type of school to be maintained at each selected location were set forth,

*This group of small pictures shows the eight buildings that were abandoned for school purposes when the consolidation was made. The new Bergman Consolidated School, Boone County, is shown at the top of the opposite page. Before the consolidation, only twenty-one children were enrolled in the upper six grades in all of the eight districts. Since the consolidation, in the school year 1931-32, there were 104 children in average daily attendance in the upper six grades. Five busses last year transported 166 children daily*

including the number of grades to be taught, the probable enrollment by grades and the number of teachers needed. A six-grade elementary school, a three-year junior high school and a three-year senior high school, or a six-year elementary school and a six-year high school were accepted as the desirable types of organization. For the most part, each consolidated system consisted of six-grade elementary schools located at strategic points in the proposed district or area, one or more schools having nine grades and one school having twelve grades. In all cases the entire territory from which senior high school pupils are to go to a proposed high school was thrown into one taxing and administrative unit.

Bus routes necessary to transport all children to the designated schools were determined. The number of pupils to be transported, the distances to be traveled and the type of road over which each bus must travel were definitely determined.

Before setting up a new system of organization, however, it was necessary to determine what objectives were to be reached by it. As a basis



units to meet the standards enumerated, a school should be maintained at as high a standard as possible under existing conditions. In such cases the establishment and maintenance of these schools should be looked upon by school officials as temporary.

3. In line with the standards described in Paragraph 1, schools should be situated so as to reduce transportation costs to the minimum. This means that schools of desirable size should be in centers of population.

4. As a general rule, all children who live more than two miles from school should be transported at public expense and the school system should be planned so that no child will be required to be on the road to or from school for more than one hour at a time.

Keeping these principles in mind at all times



for the recommendations to be made in each county the following general principles for the location and organization of schools were established:

1. Standard elementary and high school advantages should be made available for every child. In order to do this there should be enough children to justify the employment of at least one teacher for every three grades in the elementary school and approximately forty elementary pupils in average daily attendance per teacher. High schools should be established only when there are enough children to justify the employment of three teachers for the high school grades, with an average daily attendance of thirty pupils per teacher. In all cases, when practical, provision should be made for schools larger than those called for by these standards.

2. When road conditions do not make possible the consolidation of schools into sufficiently large

and basing their work upon actual conditions and definite information in each county, the survey workers proceeded to set up in each county logical school units, conforming in their recommendations to natural economic and community lines. This proposed system was based upon the consolidated district plan, although the survey staff members were unanimously in favor of a county unit system of administration. The school laws make no provision for the county unit, whereas the consolidated unit may be formed. It was noticeable, however, that in every case the countywide plan set up was identical with the consolidated district plan as to the location and organization of the various schools. The two suggested plans differed in the matters of supervision and administration.

Excluding seven of the larger cities of the state, the proposed system embraces 307 districts as compared with 4,598 in 1927-28. The new system

TABLE I—SUMMARY OF COMPARISON OF NEW AND OLD SCHOOLS

Type of School	Schools		Now		Proposed	
	Now	Proposed	Number of Pupils	Percentage of Pupils	Number of Pupils	Percentage of Pupils
One-room .....	2,495	473	67,848	23.9	13,287	4.48
Two-room .....	920	478	49,792	17.5	33,150	11.18
Three-room .....	265	171	22,745	8.1	19,138	6.45
Four-room .....	106	85	12,772	4.5	12,481	4.21
More than four-room .....	412	577	130,174	45.9	218,322	73.66
Totals.....	4,198	1,784	283,331	99.9	296,378	99.98

calls for 1,521 elementary schools in consolidations, 270 isolated elementary schools where transportation is impracticable, 560 junior high schools and 307 senior high schools. In contrast to the 7,699 elementary teachers now in service, only 5,251 will be needed. On the other hand, 2,582 high school teachers will be needed as compared with 2,102 now in service. The 307 districts will replace 3,946 districts and the 2,658 schools will replace the 4,198 schools in operation during 1929-30. Already 1,752 of the various districts have been involved in consolidations, of which 1,154 have developed since the beginning of the county surveys.

#### *The Effect of Probable Expansion*

The survey staff took into consideration the probable expansion of the schools under the proposed system. The figures used in the study included estimations of teachers that will be needed to accommodate the pupils who will be in attendance in the near future. It is expected that the number of high school pupils will increase approximately 62,500 within the next five or six years upon the inauguration of the new plan. When this maximum is reached it is estimated that 2,085 new teachers will be required. In other words, if all the children who can reasonably be expected to attend high school do so, the total number of teachers required under the proposed plan would be only 120 more than at present.

Table I presents a significant comparison of the schools before and after reorganization. It is interesting to note that whereas 23.9 per cent of the pupils of the state have been attending one-room schools, only 4.48 per cent would do so under the proposed plan. Since most of the present one-room schools are organized on a basis of eight grades, one can easily see the benefits that would accrue under the new organization.

In developing plans for the proposed school centers, due consideration was given to the probable building needs of such centers. Most of the present property was appraised and plans were made

to utilize it so far as possible. The assistance of the supervisor of buildings and grounds of the state department of education was secured and the building needs for each center were outlined in terms of a table of unit costs. Table II shows the units of cost used in the estimation of the building needs.

The survey showed that a total of 2,904 new rooms would be needed, the cost of which would be \$6,643,550. At the time of publication of the survey the amount of uncompleted building facilities still needed was \$4,802,900. Should the proposed system expand in accordance with the predictions made, a conservative estimate indicates that about 1,500 new classrooms would be needed in the future in addition to the present plants. The estimated amount needed for this increase is \$3,350,000.

With the development of the state highway systems, transportation of pupils is becoming an im-

TABLE II—UNITS OF COST USED IN ESTIMATING BUILDING NEEDS

Size	Cost of Building per Room	Cost of Equipment per Room
One-room .....	\$1,250 (frame)	(Included with bldg.)
Two-room .....	1,300*	\$500
Three-room .....	1,333*	500
Four-room .....	1,250*	475
Five rooms and auditorium .....	1,800*	400
Six rooms and auditorium .....	1,590 to 1,750*	385
Seven rooms and auditorium .....	1,500*	350
Eight to twelve rooms.....	3,000*	500
Twelve rooms and over..	4,500	500

\*Brick veneer, brick or stone buildings.

portant item in the school budget. In 1925-26 the state had 108 busses which transported 3,136 children. In 1930-31 the number of busses had increased to 1,210, while the pupils transported numbered 46,702.

In the development of the plans for each center consideration was given to the number and mileage of bus routes needed, the children to be ac-

commodated and the character of the roads to be traveled. The estimations show that 2,222 busses would be needed to transport 83,126 children, traveling 17,888 miles one way daily, at a monthly cost of \$180,278. It was also estimated that with the present cost of transportation the probable expansion in high school enrollment would require approximately \$1,000,000 annually in addition to the figures given.

The system as planned has the unique feature of permitting both local and statewide development. When the local districts feel that they can better themselves by its adoption they can go into the matter individually. In fact, this has been the case to such an extent that an appreciable percentage of development has already taken place.

An optional county unit law passed by the 1929 legislature was found to be unconstitutional and this fact retarded the development of several county systems. Another check on the extensive consolidation program was the passage by the 1931 legislature of a law requiring a majority vote of each consolidating district rather than the majority of the territory affected.

On the whole, the survey has been invaluable in pointing out to the people of the state procedures by which their local systems can be brought together in such a manner as to provide for much better schools as well as for economy in their operation.

## Health Work and Physical Education in Elementary Schools

A close administrative relationship between health work, athletics and physical education work exists among outstanding high schools in the United States, according to findings of the National Survey of Secondary Education.

"An outstanding trend among the schools is the tendency to unite under a single administrative head all the physical activities fostered," the report discloses. "This includes health work, physical education, intramural athletics and interscholastic athletics."

A notable finding of the study indicates that among the types of schools investigated, the group of junior high schools is distinctly in the lead in the scope and effectiveness of the work done in both health and physical education.

The study is based upon returns from 460 schools selected because of certain outstanding practices. Of these, 162 were regular four-year schools; 147 were junior high schools, and 151 were other reorganized types of schools. The major purpose of the investigation is to show the direction in which schools most active in health work and physical education are moving.

P. Roy Brammell, U. S. Office of Education, calls attention to two shortcomings in the health and physical education program of secondary education reported by workers in these fields. "One of these shortcomings," Mr. Brammell states, "is the lack of effective programs of correction in physical education and of proper follow-up

to facts brought to light through various tests and physical examinations."

"The other shortcoming," he explains, "is the failure to measure the effectiveness of the general programs in this field, the methods of instruction and the materials used." He points out, however, that this work although new "has made large gains, even while other more traditional subjects were losing in prominence."

The report reveals that in approximately 70 per cent of the school systems either a full-time or a part-time director of health is employed. Less than 40 per cent of the schools maintain committees to cooperate with health supervisors or directors. The schools specified thirty different types of workers who do health work. The nurse, the physical education instructor and the physician are designated as performing this work by the largest number of schools. Persons employed in this capacity seldom inspect the schools for sanitation and safety.

### *Many Schools Demand Especially Trained Teachers*

The report considers significant the fact that approximately 70 per cent of the schools employ teachers who must be qualified in part to measure up to certain standards of health. In most cases health examinations for pupils are compulsory, although the complete list of thirty-one plans indicates that in many cases local school administrators exercise considerable freedom in setting up regulations in their schools. Health examinations are compulsory when pupils enter in 28 per cent of the schools. The practice is common where more than 1,500 pupils are enrolled.

Slightly more than half of the schools have definite outlines of study for health instruction. These outlines are prepared usually by either the school system or the state department of education. Teachers of physical education and other regular staff members, the report indicates, are responsible for a large part of the instruction given pupils in definite health courses. Schools which have enrollments of less than 300 more commonly turn this work over to the regular teachers than do larger schools.

Thirty-seven different names of courses were listed by schools in which health is taught. Health courses are required most often during the junior high school year. In only one-fourth of the schools is any effort made to measure the results of health instruction. The three methods mentioned most frequently are frequent physical examinations and check-ups in corrections made, individual charts and follow-up work, and tests and records. Nineteen per cent of the schools maintain special classes for pupils possessing certain defects.

Twenty-five different kinds of health services are employed by the various schools reporting. Chief among these are free immunization for pupils, that is for diphtheria and smallpox, and free milk for malnourished pupils. Nineteen health activities are fostered among the pupils, the most popular of which are making health posters, staging health plays and programs, teaching physical safety measures, and encouraging hikes and excursions.

Mr. Brammell concludes that "the fact that a close tie-up with the home is essential to a successful program in the schools is outstanding in the data supplied."

It was found that about one-third of the schools are satisfied with their present health programs. Six outstanding needed changes are mentioned by the largest number of schools as follows: added facilities at school, full-time or part-time nurse or physician, corrective work, definite courses in health and sanitation, more teachers, and more follow-up work in the home.

# Survey Shows How Schools Conduct Curriculum Programs

*Ninety-three of 100 cities studied maintain curriculum reconstruction programs, most of which are continuous. One-half of the respondents believe that the state should be more liberal in its help*

By C. C. TRILLINGHAM, Supervisor of Practice Teachers, University of Southern California

MAJOR problems confronting the school administrator are to see that adequate curricula are available for all boys and girls and to promote the necessary revision and adaptation of those curricula. The enormously increased school enrollments in recent years, particularly on the secondary levels, have made the administration of curriculum reconstruction programs increasingly important and correspondingly difficult.

A survey was made of the school systems in 100 American cities of more than 30,000 population in order to discover actual current practice in organizing and administering curriculum programs. The practices were then evaluated in the light of the expert opinion of curriculum specialists.

Ninety-three of the 100 cities claim that they maintain curriculum reconstruction programs. Eighty-six of the programs are continuous. The number of school people working on those programs in 1931-32 ranged from three in one city to 600 in another, with a median number of seventy-five persons. The number of committees at work reconstructing curricula ranged from none in one city to eighty-five in another, with a median of ten.

## *Five Difficult Problems*

Outside curriculum specialists are assisting twenty-three city school systems at present in the rejuvenation of their educational offerings. One-half the respondents believe that the state should offer more curriculum assistance than is granted at present. Thirty-five of the city superintendents were of the opinion that university entrance requirements tend to impede genuine curriculum reconstruction in secondary schools.

The amount of money spent by the cities for curriculum activities in 1931-32 ranged from \$30 in one city to \$70,000 in another, with a median amount of \$3,000. Several superintendents had no notion of the amount of money spent on this

work. Forty per cent of the cities have had their curriculum programs at least partially curtailed during the depression, while three cities have ceased such work completely. Fifteen cities have no definite methods for appraising their curriculum work.

The greatest improvements due to curriculum work have been the stimulation of educational staff members and a richer educational offering with an improved methodology. The five most difficult problems encountered are finding sufficient time for curriculum work, establishing a sound philosophy upon which to build a program, financing the work of reconstruction, training new workers and establishing programs of appraisal.

## *Certain Principles Are Recommended*

Present practice and expert opinion seem to justify the recommendation of certain principles as follows: (1) the work of curriculum reconstruction should be continuous; (2) such work should involve both the creation of new curriculum materials and the revision and adaptation of old materials; (3) the first year of a new curriculum program should be utilized in preparing the educational staff members for its inception; (4) those responsible for curriculum work should attempt to utilize the advisory service possibilities of certain selected laymen; (5) money to be spent on curriculum work should be estimated and provided for in the annual budget and its expenditure should be carefully accounted for; (6) the worthiness of the curriculum work done should be measured through test results; teacher, pupil and community reactions; experimentation and research, and occasional evaluation by experts or university groups. Finally, a plan is proposed for organizing curriculum programs in those cities having over 50,000 population.<sup>1</sup>

<sup>1</sup>Trillingham, Clinton C., *The Organization and Administration of Curriculum Programs*, doctoral dissertation, University of Southern California, 1933.

# Should Pupils Be Promoted Annually or Semiannually?

*Ideal promotion conditions are possible only when each pupil can advance at his own rate of speed. So long as pupils must be grouped into grades it is advantageous to have semiannual promotions*

By M. A. STEINER, Supervising Principal, Public Schools, Ingram, Pa.

ONE section of the ninth yearbook of the Department of Superintendence of the N. E. A. is devoted to an evaluation of the promotion interval. The general impression obtained from arguments and opinions stated and from recent trends in practice is that the annual promotion plan is more desirable than the semiannual plan. That conclusion, however, is based entirely upon opinion and not upon objective evidence.

This analysis of the promotion records of the school system of Ingram, Pa., operated for several years under each plan without change in administration, presents evidence in favor of semiannual promotions.

## *Fewer Failures Under Semiannual Plan*

Annual promotions were continued during the first three years of my administration of the Ingram schools. At the beginning of the fourth year semiannual promotions were introduced in the first four grades and gradually extended through the high school. The accompanying table shows the average percentage of pupils promoted yearly from 1919 to 1933.

Examination of the table clearly shows that the proportion of pupils promoted during the first three years under the annual promotion plan is not nearly so large as the proportion for the twelve-year period of semiannual promotions. The average of the percentages for the twelve years of semiannual promotions is 3.7 larger than the average for the three years of annual promotions. Besides this difference between the averages, the rank of the highest percentage under the annual period is better than only three of the twelve percentages under the other plan. One of these three lower ranks for semiannual promotions is the first year, 1922, when midyear classes had been formed only through the fourth grade.

The promotion records of this school system,

including an elementary and a junior high school, clearly show that there were fewer failures during the period of semiannual promotions than during the yearly plan. Since the promotion policy had not been changed in any way, it is reasonably safe to assume that failures were reduced by the adoption of semiannual promotions.

Another significant factor is the record of special promotions under the two plans. Although it has never been the policy to push bright pupils through school rapidly, exceptionally capable pupils frequently have been given special promotions. During the three years when annual promotions were provided, the average percentage of school years gained was 2.7. During the twelve-year period of semiannual promotions this average was 2.0 per cent. This decrease of .7 per cent can be explained by a slight change in the promotion policy. During the past five years the work for bright pupils has been enriched so that they do not need to be grouped with older pupils. For the first seven years of this twelve-year period the average was 2.6 per cent as compared with 1.2 per cent for the past five years.

## *The Effect Upon Age-Grade Records*

It is also evident that about twice as many pupils were given the opportunity of making up a semester during the first seven years of semiannual promotions as during the three preceding years of annual promotions since the 2.6 per cent indicates that percentage of pupils each semester. No pupil was given two special promotions during any one year. Even the average of 1.2 per cent for the last five years under the changed promotion policy means that 2.4 per cent of the pupils gained a semester during each school year. The special advantage generally claimed for the shorter promotion interval—that it permits pupils to progress with greater ease and with less danger of disturbing their normal or natural development—is

COMPARISON OF PERCENTAGES OF PUPILS PROMOTED YEARLY FROM 1919 TO 1921 UNDER ANNUAL PROMOTION PLAN WITH THOSE FOR 1922 TO 1933 UNDER SEMIANNUAL PLAN

Annual Promotions				Semiannual Promotions			
Year Ending	Per Cent Promoted	Rank	Per Cent Special Promotions	Year Ending	Per Cent Promoted	Rank	Per Cent Special Promotions
1919	94.9	10	2.6	1922	93.9	11	6.1
1920	88.4	15	2.7	1923	95.3	6	1.9
1921	91.6	14	2.8	1924	96.6	2	1.5
				1925	96.5	3	1.9
				1926	96.9	1	2.6
				1927	95.9	5	1.5
				1928	95.2	7.5	2.5
				1929	93.6	12.5	1.2
				1930	93.6	12.5	1.6
				1931	95.2	7.5	0.8
				1932	95.1	9	1.1
				1933	96.1	4	1.3
Mean	91.6		2.7	Mean	95.3		2.0

clearly illustrated by the percentage figures cited above.

Since the change from annual to semiannual promotions increased the percentage of pupils promoted as previously indicated, it is significant to note the effect upon age-grade records. Age-grade tables for every odd year beginning in October, 1921, and including October, 1931, were required by the Department of Public Instruction of Pennsylvania. Since the summary for Grades 1 to 8 in 1921 represents conditions under annual promotions, those results can be compared with those of the five following reports.

#### *Certain Principles to Observe*

In 1921 the percentage over age was 23.5 and the percentage under age was 8.1. The average percentage over age for the last five periods under semiannual promotions was 17.6, with a range of 13.8 to 20.9 per cent. The average percentage under age was 8.8, with a range of 7.3 to 10.0 per cent. Although these results indicate a decrease of 5.9 per cent in over age pupils and a slight increase in the percentage of under age pupils during the period of semiannual promotions, this is only additional evidence of a substantial increase in the percentage of pupils promoted under the semiannual plan.

In spite of the fact that fewer failures occurred under the shorter promotion interval, such improvement cannot be credited directly to the use of semiannual promotions. It is safe, however, to claim that this promotion interval can be so successfully administered that the percentage of pupils making normal progress will not be decreased and may be increased. Since the only administrative change made during the entire period covered by these records was the introduction of midyear promotions, it is reasonable to believe that this

change helped to reduce pupil failures by an average of 3.7 per cent.

In the efficient administration of semiannual promotions, several guiding principles must be observed. Those applied in the Ingram school system are: (1) report cards cover both semesters, (2) books are not collected from pupils at the end of the first semester, (3) teachers frequently have the same pupils both semesters, (4) no interruption of regular school work occurs between semesters, (5) at the end of the first half of each semester teachers are required to submit lists of possible failures with their causes, (6) trial promotions for one month are granted in all doubtful cases and to pupils with failures in only one major subject and (7) pupils are promoted on the basis of test scores, monthly marks and the opinion of teachers as to the pupil's ability to carry the work of the next grade.

#### *Each Pupil Should Advance at Own Rate*

By observing these guiding principles in the administration of semiannual promotions and by giving careful attention to the causes of failure, the chief advantage of the shorter promotion interval will be fully realized. This lies in the fact that pupils who fall behind their classmates on account of absence, mental dullness, natural slowness or indifference can be adjusted to their achievement level with less repetition of school work under semiannual than under annual promotions.

Ideal promotion conditions are possible only when each pupil can advance in his work at his own rate of speed. So long as pupils must be grouped into grades for economic reasons it is feasible and advantageous to have semiannual readjustments provided a school system is large enough to group its pupils so that no teacher will have more than two grades in a room at one time.



## A School Planning Program That Produced Good Results

By H. W. SCHMIDT, Supervisor of Buildings, Department of Public Instruction, Madison, Wis.

**J**ANESVILLE is a thriving city of about 22,000 population, situated in the Rock River valley in the southern part of Wisconsin. It is a small manufacturing center, and is the seat of an automobile assembly plant with an automobile body plant as an auxiliary. The city is the focal trade point of a rich farming community.

Janesville has always taken pride in the progressiveness of its school system. The city's present school enrollment of 3,324 pupils includes 2,137 pupils in the elementary grades and 1,187 in the four-year high school.

In 1928 the situation gave rise to certain questions regarding school changes and an attendant expansion program of considerable proportions for a city of the size of Janesville. The questions involved were of an academic and a practical nature.

The school authorities asked the state department of public instruction for help, and a survey of the whole situation was made to determine the most feasible plan for the future.

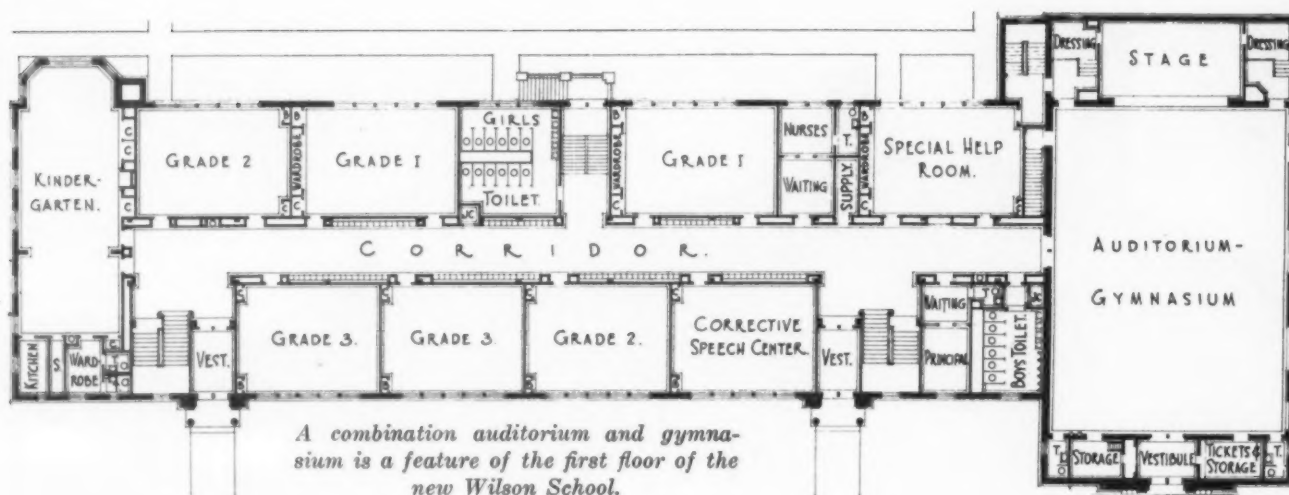
Janesville, in 1928, had eight elementary school buildings and a junior-senior high school. The elementary school buildings, scored by means of the Wisconsin score card for city schools, were found

to be mostly in the fair class, with two buildings designated as good and one as poor. The high school, a relatively modern plant, was rated as very good with a score of 889 points.

The survey also showed that on a basis of forty-five pupils enrolled per room the capacity of the elementary plant had been reached; this was also true of the high school.

These ratings indicated that at least one building should be discarded. This was recommended and two

*The practical features and the results of an extensive school planning survey conducted in Janesville, Wis., are reviewed by the author. Numerous perplexing problems were encountered in evolving the new program, which was carried through successfully despite limited finances. Special features of one of the new buildings are described*



other buildings were added to the undesirable list.

But aside from the considerations of construction, it was evident that with an enrollment of 1,948 pupils in kindergarten to sixth grade inclusive, Janesville was burdened with a large number of small schools and this, of course, entailed a rather large operating budget. Although admittedly poorly arranged from the modern viewpoint, these schools, with the exceptions noted, were of such sturdy construction and were kept in such good repair that they could not be condemned even in a program of expansion. As all school executives know, it is a difficult matter to convince others that it may be economy in the long run to discard buildings that are obsolete and out-of-date.

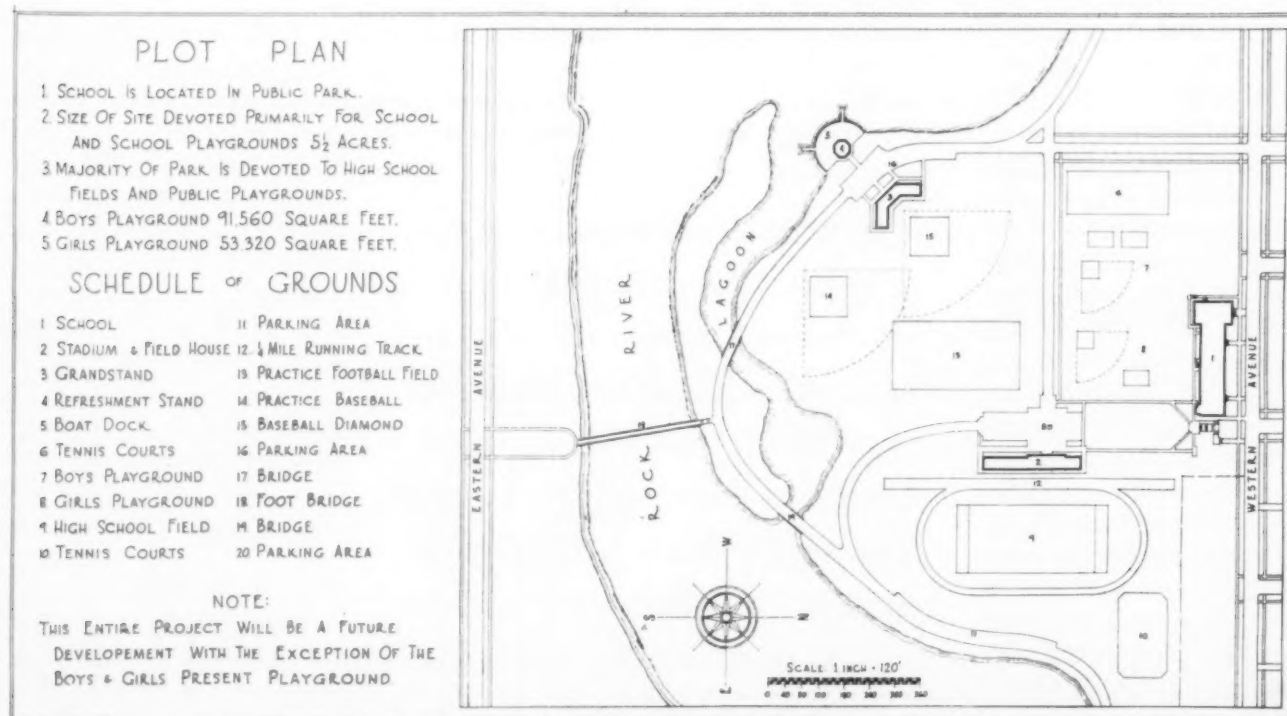
Another interesting situation confronted the investigators. The "spot" maps made to show the

location of the home of each pupil revealed a remarkably compact distribution of pupils, and aside from a few outlying areas there were no school population centers. The maps showed that nearly all the school buildings were strategically located, and that 95 per cent of the school population was in a circle whose radius was one mile.

#### Obstacles That Had to Be Overcome

Other obstacles that stood in the way of achieving a completely unified and centralized school plan were the configuration of the land, a river and a series of railroad tracks and yards.

The investigation also showed that with three exceptions the buildings did not lend themselves to extensions, alterations or additions, and even the three exceptions were poorly adapted for these



purposes. The same situation applied to the high school building. The sites were not large and in most instances they were inadequate according to modern needs. The study showed it would be costly to extend the buildings, and that in some instances it would be impossible to acquire the necessary additional ground space.

The study of the high school situation showed that the building was filled to capacity on the basis of one-hour recitation periods. The median class size was twenty-five pupils. The building's capacity could have been increased approximately 20 per cent by adopting a forty-five-minute-period

gin for an extensive school building program when other municipal expenditures had to be considered.

The following recommendations were made: (1) centralize the system as far as possible by erecting a four-room addition to one of the elementary schools; (2) abandon two, possibly three, of the smaller elementary buildings; (3) acquire a site for a new centralized elementary school and erect a new elementary school thereon, and (4) erect an addition to the present high school.

For certain reasons the program hung fire for nearly two years and finally took shape in a modified form. The centralization idea was adopted in

THE EDUCATIONAL PROGRAM			
GRADES INCLUDED IN THIS SCHOOL - KINDERGARTEN & GRADES 1-7 INCLUSIVE ESTIMATED TOTAL CAPACITY, EXCLUSIVE OF KINDERGARTEN 525. SIZE OF CLASSES EXCLUSIVE OF KINDERGARTEN 35 LENGTH OF SCHOOL DAY FROM 9:00 AM TO 11:45 AM - 2 HOURS, 50 MIN FROM 1:15 PM TO 3:45 PM - 2 HOURS, 15 MIN LUNCH PERIOD: 11:45 AM TO 12:30 PM TOTAL NUMBER OF HOURS AND MINUTES IN SCHOOL DAY, EXCLUSIVE OF LUNCH PERIOD, 4 HOURS 45 MINUTES NUMBER OF MINUTES IN PERIOD 20 MIN. TO 45 MIN NUMBER OF PERIODS IN SCHOOL DAY 12 IN PRIMARY TO 7 IN 7 <sup>TH</sup> GRADE.		EDUCATIONAL PROGRAM OF WILSON SCHOOL FOR ONE WEEK.	
KINDERGARTEN	GRADE 1 (2 ROOMS)	DAILY AM SESSION - 35 PUPILS	DAILY P.M. SESSION - 38-40 PUPILS.
GRADE 2 (2 ROOMS)	GRADE 3 (2 ROOMS)	DAILY AM AND P.M. SESSIONS	35 PUPILS
CORRECTIVE SPEECH CENTER	SCHOOL NURSES ROOM	DAILY AM AND P.M. SESSIONS	33 PUPILS
SPECIAL HELP ROOM	AUDITORIUM - GYMNASIUM	DAILY AM AND P.M. SESSIONS	34 & 35 PUPILS
		ROOM USED THREE TIMES PER WEEK BY SPECIAL TEACHER IN SPEECH CORRECTION	
		SCHOOL NURSE MAKES REGULAR BI-WEEKLY CALL AND SPECIAL VISITS	
		PRINCIPAL OF BUILDING USES THIS ROOM ONE THIRD OF EACH DAY FOR TUTORIAL	
		WORK WITH INDIVIDUALS OR SMALL GROUPS WHO NEED SPECIAL HELP	
		USED THREE DAYS FOR GYMNASIUM CLASSES UNDER DIRECTION OF SPECIAL	
		PHYSICAL EDUCATION TEACHER. USED TWO DAYS BY CLASS ROOM TEACHERS	
		FOR SPECIAL PROGRAMS USED FOR COMMUNITY PURPOSES EVENINGS	
GRADE 4 (2 ROOMS)	GRADE 5 (2 ROOMS)	DAILY AM AND P.M. SESSIONS	33 & 35 PUPILS
GRADE 6 (2 ROOMS)	GRADE 7 (3 ROOMS)	DAILY AM AND P.M. SESSIONS	34 & 37 PUPILS
LIBRARY		DAILY AM AND P.M. SESSIONS	35 & 38 PUPILS
MUSIC ROOM		ONE OF SEVERAL 7 <sup>TH</sup> GRADE CENTERS THREE TEACHERS ENROLLMENT 85.	
		DEPARTMENTALIZED TEACHING	
		SCHOOL LIBRARY BEING DEVELOPED. WILL HAVE FULL TIME LIBRARIAN FOR THIS SCHOOL	
		USED TWO DAYS PER WEEK BY SPECIAL TEACHER OF MUSIC WITH ALL GRADES. OTHER DAYS	
		USED BY REGULAR ROOM TEACHERS FOR MUSIC INSTRUCTION. EQUIPPED FOR	
		CHORUS INSTRUMENTAL AND APPRECIATION WORK.	
		USED THREE DAYS PER WEEK BY SPECIAL CREATIVE ACTIVITIES TEACHER WITH 7 <sup>TH</sup> GRADES	
		TWO DAYS FOR OTHER GRADES END OF ROOM USED DAILY FOR LUNCH ROOM	
	ACTIVITIES ROOM		

program, but this was not deemed feasible. Out of 306 room periods available, only twenty-five were not in use and half of these were assigned to laboratory and shop spaces—a very high utilization.

There was an enrollment of 1,450 pupils in the high school. This seemed large but the survey showed that this was due in part to an influx of pupils from the parochial school and to a rather heavy tuition pupil load from outside districts.

The above summarizes the more objective findings of the survey. Theoretically it would have been easy to formulate a good program, such as centralized elementary schools, larger sites and two junior high schools, one on each side of the city. But practically it was not quite so simple, due to the financial program involved and the other obstacles already mentioned. The bonding ability of Janesville at the time of the survey was approximately \$365,000, which did not leave a large mar-

theory, and also in practice by providing a four-room addition to one of the elementary schools, and by demolishing two elementary schools and abandoning another. A new centralized elementary school, the Wilson School, was erected on a site provided by the city.

In addition, the Roosevelt School, a ten-room unit, was erected in another part of the city to take the place of one of the old buildings. No addition was erected to the high school.

The general principles underlying the survey recommendations were carried out as far as finances permitted. A rather important change was necessary, however, due to lack of space in the high school building. The seventh grade pupils were shifted back from the junior high section to their "home" elementary schools, leaving the eighth grade in the high school building. The total enrollment in this building is now the same as it was in 1928, and the school is again filled to

capacity. The present arrangement is one of expediency and as soon as conditions warrant the original 6-3-3 program will be reestablished.

The administration devoted its major attention to relieving the elementary school situation rather than to erecting monumental structures for the upper third of the school system.

This, in brief, is the actual outcome of a comparatively simple school planning survey and program. It may be of interest in its practical applications to other school administrators. It is interesting to learn how the architects, Law, Law and Potter, Madison, Wis., in conjunction with the school administration, worked out the problem of one of the centralized schools. Let us take the Wilson elementary building as an example. The accompanying picture and floor plans show in detail the arrangement of this school.

When the Wilson School was first projected it presented to the board of education and to the architects an exceptional opportunity as well as several unusual problems.

The board desired a building that would embody the most advanced ideas of modern educational practice. The board desired a fireproof structure, and it wished to keep the cost moderate.

The site consisted of five and one-half acres of marsh land along the Rock River. The rear portion of the site was barely above the water level, and the street front was fifteen feet higher.

Unusual topography often is considered a disadvantage, whereas a little careful planning sometimes can make it an asset. In this instance it was imperative that the building be kept as near the

street as possible. An advantage that accrued from this is that the playground is at the rear, which means that the front lawn is easily kept in good condition.

The contours of the terrace on which the building was placed are such that although the first floor is just above grade at the front, the entire basement story is above grade at the rear or south elevation. The result is that the south half of the basement is as well lighted as the upper stories of the building. The basement space was so large that all of it was not needed. Consequently only 38 per cent of it was excavated full depth, the natural grade being left in the remainder.

The instructional program required fifteen classrooms, a kindergarten, a corrective speech room, a special help room, a music room, an art room, a library and a combination gymnasium and auditorium with a stage. Since the school serves a fairly stable and fully developed territory it was not necessary to plan for future expansion, at least for many years to come.

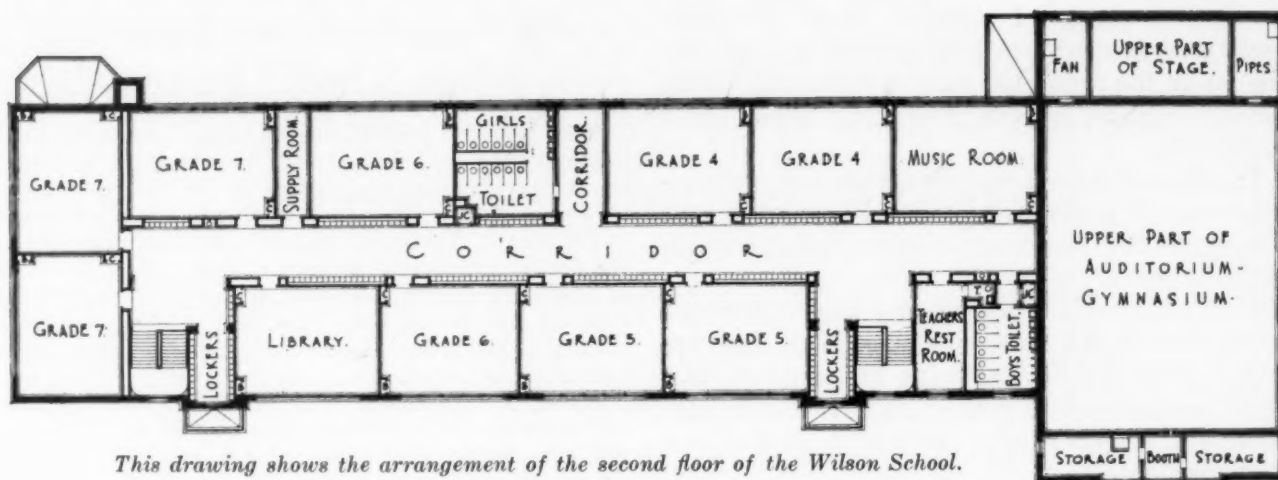
#### *Classrooms Are Especially Cheerful*

The combination auditorium and gymnasium is at the west end of the building. It has a separate entrance at the front, exits at the side and rear and double doors leading to the main corridor of the building. The kindergarten is at the east end of the building so as to separate the small children from the older ones and to take advantage of light on three sides of that suite.

Splendid circulation is provided by means of a ten-foot central corridor that extends the full

### STATISTICAL DATA

- |   |  |  |
|---|--|--|
| 1. DATE CONSTRUCTION WAS BEGUN APRIL 12, 1929   | 5. CONTINUED:                                    | 7. CORRIDORS                             |
| 2. DATE CONSTRUCTION WAS COMPLETED JUNE 6, 1930 | C SECOND FLOOR ROOMS DIMENSIONS CEIL HGT         | A WIDTH OF CORRIDORS IN CLEAR IS 10-0    |
| 3. NUMBER OF STORIES                            | 1 GRADE 4 22-1 X 30-2 12-2½                      | 8 HEATING PLANT                          |
| A GROUND FLOOR (38% OF FIRST FLOOR)             | 2 GRADE 4 22-1 X 30-2 12-2½                      | A HEATING PLANT INCORPORATED IN BUILDING |
| B FIRST FLOOR                                   | 3 GRADE 5 22-1 X 30-2 12-2½                      | 9 COSTS.                                 |
| C SECOND FLOOR                                  | 4 GRADE 5 22-1 X 30-2 12-2½                      | A SITE IS CITY PROPERTY DEVOTED TO       |
| 4. TYPE OF BUILDING - "B"                       | 5 GRADE 6 22-1 X 30-2 12-2½                      | SCHOOL, PUBLIC PARK & PLAYGROUND         |
| 5. A BASEMENT ROOMS DIMENSIONS CEIL HGT         | 6 GRADE 6 22-1 X 30-2 12-2½                      | B COST OF IMPROVING PROPERTY *2000-      |
| 1 ACTIVITIES 12-2½                              | 7 GRADE 7 22-0 X 28-11 12-2½                     | C COST OF BUILDING *200,683.-            |
| B FIRST FLOOR ROOMS                             | 8 GRADE 7 22-0 X 28-11 12-2½                     | D COST OF MOVABLE EQUIPMENT *7500.-      |
| 1 KINDERGARTEN 22-0 X 55-0 12-2½                | 9 GRADE 7 22-1 X 30-8 12-2½                      | E TOTAL COST OF BUILDING & EQUIPMENT     |
| 2 WARDROBE 7-8 X 11-6 12-2½                     | 10 LIBRARY 22-1 X 30-2 12-2½                     | *208,183.-                               |
| 3 KITCHEN 6-9 X 11-6 12-2½                      | 11 MUSIC 22-1 X 30-1 12-2½                       | F CUBIC FOOT COST OF BUILDING 26.38¢     |
| 4 GRADE 1 22-1 X 32-2 12-2½                     |  |  |
| 5 GRADE 1 22-1 X 32-2 12-2½                     | 6. COMBINED AUDITORIUM - GYMNASIUM               |  |
| 6 GRADE 2 22-1 X 32-2 12-2½                     | A AUDITORIUM - 50-0 X 66-5 25-6 CEILING HEIGHT   |  |
| 7 GRADE 2 22-1 X 32-2 12-2½                     | B STAGE 15-7 X 30-2 14-0 CEILING HEIGHT          |  |
| 8 GRADE 3 22-1 X 30-2 12-2½                     | C SEATING CAPACITY OF AUDITORIUM 550             |  |
| 9 GRADE 3 22-1 X 30-2 12-2½                     | D TWO DRESSING ROOMS EACH 10-0 X 15-0            |  |
| 10 SPECIAL HELP 22-1 X 32-1 12-2½               | E AUDITORIUM CHAIRS STORED IN TWO STORAGE        |  |
| 11 CORRECTIVE SPEECH 22-1 X 30-2 12-2½          | ROOMS AT REAR OF AUDITORIUM                      |  |
|   | F GYMNASIUM SPACE 50-0 X 66-5 22-0 CLEAR HEIGHT. |  |



This drawing shows the arrangement of the second floor of the Wilson School.

length of the connecting unit. There are front entrances and stairs at each end of the corridor and a wide stair exit in the center at the rear that provides direct access to the playground.

The corridors are beautifully finished with asphalt tile flooring, having a terrazzo border and base, and textured plaster walls especially decorated with oil colors. The lockers are recessed into the walls and ventilated, and the drinking fountains are also recessed so that nothing projects into the corridors. The stairs are finished with terrazzo, and have ornamental wrought iron railings. The acoustics are good, having been given proper attention throughout.

Special emphasis was placed on the design of a typical classroom. It was felt that each classroom should be made as cheerful and hospitable as possible, because in the elementary grades the child spends his full time in one room. Each elevation of the typical classroom was studied carefully in order to make the room harmonious, and even the height at which pictures were to be hung above the blackboard in the room was given thoughtful consideration.

#### *Kindergarten Is a Complete Unit*

The elementary school classroom must fulfill many requirements. There must be a closet for the teacher's clothes and personal belongings, and also a closet for the storage of equipment and books, as each classroom should have its own library facilities. The plainness of the front of the ordinary classroom was relieved by providing a recess between the two closets, accented by ornamental plaster work.

The kindergarten is a complete unit, with a fireplace, a drinking fountain and built-in cabinets with individual compartments for each child's belongings. In conjunction with the kindergarten are a wardrobe, toilets, storage closets and a kitchenette.

The exterior design of the building is a modification of the Georgian style, which with its sloping tile roof harmonizes with the surrounding homes. This style of architecture is economical. It was felt that the direct connection between the home and the school in its service to the community should be emphasized by making the design a harmonious one rather than one that was in contrast with its environment.

#### *Plumbing, Heating and Ventilating*

The only structural difficulty encountered was in extending the footings down to suitable bearing soil. Soil exploration tests were made before the drawings were started, and it was determined that the footings would have to be placed fifteen feet below the basement floor, through marsh muck, in order to reach a gravel stratum. In order to economize, all exterior walls are supported on reenforced concrete piers spaced about twenty-five feet on centers. The basement walls above are reenforced to act as beams from pier to pier. Considerable difficulty was experienced in placing the piers and footings. It would have been much more difficult and expensive to extend the walls down to a continuous footing.

The structure is reenforced concrete construction throughout except for the roof, which is built of steel purlins that carry gypsum blocks supported on steel tees.

The heating plant is a complete vacuum system with automatic control, the normal heating load being taken care of by direct radiation. Additional heating requirements and ventilation are provided by unit ventilators in each classroom.

Half the air from the classrooms is discharged into the corridors, and half through ducts leading to a trunk duct in the attic. Part of the air going into the corridors is circulated through the lockers and up to the trunk duct. The remainder is exhausted through the toilet rooms and out through

the roof by means of separate vents. The attic trunk duct is discharged by gravity through the cupolas on the roof. The cupolas were made ornamental features, instead of ordinary sheet metal ventilators.

The exhaust ducts from the classrooms are shallow metal ducts placed behind the lockers, instead of masonry flue ducts that would increase the width of the building.

In the matter of plumbing, the toilet rooms are provided with adequate pipe chambers that are readily accessible for servicing and repairs. Hot water is supplied by a coal fired heater and storage tank. The system is equipped with a temperature regulator.

#### *Electrical System Is Unusually Complete*

The electrical system includes a complete clock system, with a master clock, a program machine, and a secondary clock in every room. Each classroom is wired for radio, and also contains a receptacle for a projection machine. The lighting is designed to provide illumination in conformance with the latest recommended requirements, with the possibility of fifteen foot candles if desired.

The auditorium stage is fully equipped for theatrical performances. It has footlights, border lights and heavy duty plug receptacles for flood lights. The stage has a switchboard with a dimming device so that any intensity of illumination may be had. A fireproof projection booth is at the rear of the auditorium. All motors throughout the building are supplied by a power service that is independent of the lighting service.

The Wilson School exemplifies the good judgment of the board of education and the architects in not spending money lavishly, even though the building was erected in prosperous times. Economical construction is for the best interest of school programs. The careful selection of materials and the obtaining of artistic effects in a simple manner are essential to sound school planning and design.

The building has often been referred to as a model school. It was one of those selected for display at the convention of the National Council on School Building Problems, held at Detroit two years ago, and also for publication by the U. S. Office of Education.

Everyone appreciates the fact that landscaping is necessary to set off and enhance a building. It is unfortunate that the accompanying photograph was taken before the landscaping was done. The plans for the athletic field and its development are being carried on and form an important part of the whole program which is taking on a civic aspect.

## Ten Suggestions for Improving High School Libraries

Many schools have full-time librarians who are college graduates and who have had professional training in library science, according to the findings of the National Survey of Secondary Education in its study of library conditions in 390 schools. The report indicates, however, that most of the smaller schools employ teacher-librarians. In a number of these schools the teacher-librarians have had library training and at the same time their teaching loads are reduced so that they may devote a major portion of their time to library work.

Among the outstanding recommendations which conclude the report are the following: (1) a need for both extensive and intensive study of library standards which have been set up by states and other school accrediting bodies; (2) extensive study to determine the effect of newer methods of classroom teaching on the use of the secondary school library; (3) a series of studies to appraise the methods of encouraging recreational reading; (4) a study of the effect which regularly scheduled free reading has on the pupils' recreational reading habits; (5) continued study of the relation of the library to the study hall; (6) an investigation of cooperation between school and public libraries; (7) further inquiry into methods of selecting books for the high school library; (8) investigation of the entire problem of instruction in the use of books and of libraries; (9) careful investigation of training secondary school librarians, and (10) continued study of practices, devices and procedures successfully used in outstanding secondary school libraries.

## Are Schools Playing Fair With the Personality Problem?

Work with a group of 1,800 problem boys, enrolled during the past three years in the Montefiore Special School, Chicago, indicates that one of the most important problems in school adjustment is the personality problem, according to Edward H. Stullken, principal. Personality is built upon a physical foundation and some physical defects, especially glandular disturbances, contribute strongly to the development of undesirable personalities.

The mental development also plays an important part and mass education with its closely graded systems and its overcrowded classrooms is unable to handle the complex problems of securing better integration of the personalities of those children who deviate even slightly from the rank and file. The adolescent age with its attendant emotional instability is a particularly important time in the development of personality. Studies of home conditions of poorly adjusted boys indicate that there are many social and economic factors operating to increase the difficulties facing the school in its attempts to play fair with the personality problem. No single factor in attacking the problem is greater than that of the personality of the teacher which inevitably reacts on the child.

School administrators must remember that teachers are humans and have personalities quite as much as children and the clash of pupil and teacher personality is fraught with possibilities for good or bad. No adequate attack can be made upon the problem without a complete understanding of the many and varied attributes of the individual child.

# Planning Is More Effective Than Noise in Publicity Work

*A simple, straightforward explanation of the school program, presented to the public in a tactful manner will produce the desired results. The publicity program should be dissociated from propaganda*

By M. J. HENLEY, Superintendent of Schools, Fountain, Colo.

THE public schools are passing through a critical period. They should use every opportunity to interpret the work of the educational system to the public. The opinions of some of the more thoughtful leaders in this field may help to orient the activity for other educators.

Engelhardt<sup>1</sup> says, "The purpose of publicity, a necessity of democracy, is enlightenment. Publicity is an aspect of education. . . . It was legally necessary for the school community of earlier periods to post in public places the announcement of the annual meetings and to publish a financial statement. In many states school boards are requested to publish the action taken at meetings and annually to publish a financial statement.

"Simplicity and honesty go a long way in gaining public support. The constant repetition of one's message will ultimately gain recognition for it. An idea carefully thought through and clearly, tactfully and continuously presented for public consideration for a long time in advance will win approval."

## *Every Business Needs Good Publicity*

Educators are engaged in the business of conducting the public schools. No business can prosper indefinitely without organized planned publicity. Many business corporations spend 10 per cent of their total sales for advertising. It is not expected that any school system will spend 10 per cent of its total budget for publicity, but it is important for the school system to keep this business constantly before the public. Ward G. Reeder,<sup>2</sup> conceding that "at this time expenditures for all public functions should be reduced as much as possible" says, however, that "in many communities the schools are being crippled by unnecessary curtailments and retrenchments. . . . School officials must sell and resell the schools to the public. Just as many well managed businesses today are engaged in larger advertising and public relations

campaigns than ever before, so the schools must give greater and more intelligent consideration to public relations than in the past."

In his discussion, "Interpreting the Secondary School to Its Community," Moehlman<sup>3</sup> says, "A discussion of public relations must be approached in terms of the general problem of which publicity is a phase. A school public relations program is community education with respect to the purpose, value, condition and needs of its public schools. Its purpose is not selfish. It has no ulterior motives. It must be carefully dissociated from propaganda. It is merely a recognition of the need for the dissemination of factual information under conditions that have made the older method of verbal reporting to the community inadequate."

## *Publicist and Teacher Have Common Problem*

An editorial in the *Journal of Educational Research* for May 13, 1926, emphasizes that "the public school is the public's school and its past, present and future must always be thought of and written of with that distinction in mind. We incline to emphasize that the public's school can go no farther and no faster than the public will go."

Clarence H. Levitt<sup>4</sup> says, "The problem of the publicist and the teacher is identical. They both have a commodity, a necessary product, to sell. The teacher sells ideas of citizenship, service and the like. The publicity man sells ideas, the goodness of his product—soup, breakfast food, radios, automobiles. The publicist is a teacher and the whole world is his classroom. His subject matter may be ships or shoes, or sealing wax or cabbage or kings. His method has but one objective—the use of his product. His standard test is, does my class, the public, buy?"

<sup>1</sup>Engelhardt, Fred, *Public School Organization and Administration*, pp. 534-35.

<sup>2</sup>Educational Research Bulletin, May, 1931.

<sup>3</sup>Moehlman, Arthur B., *The NATION'S SCHOOLS*, Jan., 1932.

<sup>4</sup>Educational Review, April, 1928.

# Editorials

## Go to Cleveland

THE Department of Superintendence of the N. E. A. meets at Cleveland in February. In this most crucial year for public education it is highly desirable that every member of the department make every effort to attend the convention regardless of depleted budgets. There is no better way of showing desirable solidarity and interest than to gather with other members of the profession for discussion of vital problems.

The very nature of the program and its organization should be an added attraction. President Paul C. Stetson has tried the delicate experiment of making this meeting a working conference instead of a listening one. The problems involved in putting several thousand people to work on a series of projects are numerous and involved. The fact that hundreds of committee chairmen and subchairmen have been actively engaged in preparing for the program should be valid indication of interest in cooperative problem solving.

Make your decision now. Plan to attend the Cleveland meeting even if you attend no other during the year.

## Sterilization and the Public Schools

GERMANY, according to recent news reports, has just enacted a national sterilization law. The law establishes local boards for determining who shall be sterilized. As a court of last resort, there is a national board to which cases can be appealed. The decision of this board is final. Other details of the new law were not disclosed.

Sterilization is by no means a new concept. Many states in our own country have sterilization laws. Most of these laws, however, are narrow in scope and ineffective, due to lack of proper enforcement machinery.

The need of adequate sterilization laws within each of the forty-eight states is generally conceded by persons who have given the problem considerable thought. State institutions for the feeble-minded, state schools for the deaf and the blind and state industrial schools for the delinquent child have been established and are maintained at public expense. Public day schools are establishing and maintaining schools and classes better to

provide for children with such handicaps. The cost of such a program of training and education is, we know, far greater than that of educating the normal child.

We know that heredity is a big factor in these various handicaps. We know, therefore, that after we have educated the present generation of handicapped children, we shall have to continue to educate at great expense their children, their grandchildren and their great-grandchildren. Even after these individuals have been educated, society will have to continue at further expense to maintain and support a great number of them.

School systems have maintained special classes for mental defectives through three generations. Now the grandchildren of the first generation are found in these same classes. Social workers find on the relief lists the children and later the grandchildren of persons who formerly appeared on these lists.

The problem of supporting those who are defective mentally, physically and socially grows greater every year, entirely apart from financial depression. Unless this trend is stopped and unless the fit instead of the unfit can be born, we seem to be drifting toward a day when the unfit will be so numerous that the cost of maintaining them will be unbearable and when their effect upon popular government will be increasingly destructive.

Students of the problem have been advocating sterilization of the unfit for several decades. The whole problem is so surrounded by sentimentality, however, that we have been unable to secure effective legislation in this country. Unquestionably we need a program of education to make known to all persons facts concerning sterilization and its allied problems—birth control, procreation and the need for exercising intelligence in bringing children into the world.—Arch O. Heck.

## Degrading the Profession

THE present plan to meet adult educational needs in the different states by employing jobless teachers at work-relief rates of pay out of federal funds is nothing short of disgraceful. The redirection of adults and their ultimate rehabilitation for changed industrial needs is one of the vital problems before the schools. In addition to caring for the children now attending the schools, it is absolutely essential for social safety to provide educational facilities for the many thousands who have lost their bearings and in many instances their courage.

The ballyhoo of the speculative realtor in the earlier stages of the depression caused boards of

education to lop off free adult education. Superintendents and principals unfortunately did not bring this need directly to the people but progressively eliminated afternoon, evening and general continuation schools. In so casual a manner one of the greatest needs of current times was denied.

The federal government awakened to the need apparently before the local school systems did. The present plan, concurred in by many states, proposes to employ jobless teachers at welfare rates, thus further degrading the profession and reducing professional compensation and purchasing power to less than bare subsistence level. Will the profession protest the dictum or accept it meekly and mildly in customary pedagogic fashion?

### Let Us Fervently Hope

**M**AYOR-ELECT Fiorella La Guardia has issued a seventeen-point communique on his attitudes and relationships to the public schools of New York City. This most interesting document stands unique in the attitude of urban executive officers toward public education.

It is also more than a gesture since the mayor can do as he desires through his control of board of education appointments. Mr. La Guardia is planning to remove public education from partisan political control and place it closer to the community and to the parents. He will restore the original unit executive organization that time, lack of strong leadership and Tammany influence have succeeded in breaking down.

Mr. La Guardia apparently has conceived the notion, so rare in the professional politician, that public education has a vital social function to perform and that in order to discharge this duty it must be operated in the interests of the state and the children rather than for the politicians and some of the professional personnel. He is planning to take one activity, enforcement of compulsory education laws, heretofore independent of the central educational purpose, and make it thoroughly an educational activity in the hands of specially trained teachers and social specialists.

He promises to coordinate secondary education with the rest of the system. He promises support of the continuity of the teacher tenure act in order to provide security for the professional personnel. He guarantees fair working conditions for teachers, free from political and organization hazards. He also decries local "authorship" in textbooks which is becoming professionally offensive in New York and elsewhere.

A forward looking step is Mr. La Guardia's contemplated appointment of an "educational ad-

visory council, composed of representatives of the teachers, with a competent, experienced chairman to advise upon educational matters." Whether this council is to advise the board of education or the mayor is not quite clear. We trust its responsibility will be to the board of education.

Taken as a whole, the La Guardia educational program is one of the best nonprofessional statements of policy yet published. The new mayor deserves unlimited praise for the fundamental social intelligence displayed in its preparation and we wish him every success. If half of the proposed activities are accomplished at the end of two years the achievement will be truly remarkable.

There are two ways in which the plans may be worked out so as to rid the New York schools completely of the pernicious and deadly Tammany influence that has cramped for so many years the earnest efforts of the intelligent and conscientious professional personnel. The first and most logical way would be to appoint a board of education pledged to carry out this reform program and then to let the board alone.

The second plan is to maintain direct personal interest and control. This plan can lead only to disorganization within the activity itself. Although conceived with the best possible intentions it will, over the long span, prove to be pernicious. We trust that Mr. La Guardia will take the first path—appoint an intelligent and aggressive board and then keep his hands completely off the schools.

### Teachers' Unions

**F**ROM 1902 to 1929 seventy teachers' unions were formed. In the first year of the depression thirty-five of these were still actively affiliated with the American Federation of Teachers. Since 1929, including the first seven months of 1933, forty-eight active locals have been added to the list, making a grand total of eighty-three active locals at the start of the current school year.

The total membership in these groups is estimated to be from 12,000 to 16,000. They are located chiefly in the north central, middle Atlantic and south Atlantic states. If we study the spread of union organization in relation to the difficult depression conditions in certain large industrial centers, the correlation is high. It seems to give a basis to the claim of leaders in this field that the need for mutual protection demanded organization.

Instead of ignoring or condemning this movement it might be better practice for administrators to study conditions and underlying causes and seek rational and intelligent remedy.

## Happy to Say—By WILLIAM McANDREW

**A**N INGRATE is perhaps only a forgetter. Think how easily you forgot to renew your gratitude. Your benefactor remembers you more than you remember him, and maybe exaggerates. What of it? You can be an expert appreciator.

**T**HINKERS may not make the most money but they can get the most out of what they do make.

**A** MISTAKE that puts you into remorse destructive of your effort should not be wasted. Use a broken slab as a stepping-stone to solid ground.

**A**T LEAST one softening of the dread of death is that the funeral sermon will give you a better reputation than you have now.

**I**T IS a kind Providence that has endowed each of us with a belief that we have some sort of superiority. Teachers soon learn to stop telling a troublesome boy he's utterly bad. He knows it isn't so. He is sure he has some good quality. Ask him what it is and build on it.

**S**EEKING approval of good work done is a childish trait that needs to be put away when we grow up. It's like saying, "Please laugh at this joke." It brings only a sniff.

**Y**OUNG Hargreaves, a neighbor of mine, makes illustrations for books and magazines. He blocks out main lines with bold strokes. He corrects and improves them until the drawing suits him. He tells me this refining process is to him a great delight. I imagine it is action getting nearer to an ideal of the mind. Managing a class, or a school, or a system, is like that.

**H**AVE you inescapable duties for which you have no taste? Well, don't you know that a cultivated taste is much admired—and attainable?

**T**HE confessions of some criminals that they became such in trying to get away from boredom and the common belief that men enlist in war so as to escape from monotony may suggest an answer to the sour critics who say you are making things too happy for the children. Why not make life as pleasant as school?

**A** TEACHER is expected to inculcate in children a love of truth. But a lot of them live in homes streaked with falsehood and evasion. This is one of the facts that show how valuable you are. Hon-

estly, can you think of any calling fuller of satisfaction?

**F**OR years teachers at their meetings used to hold back most lazily. If an institute speaker asked a question nobody made an effort to think. There was only waiting for the asker to answer himself. There has been much suspended animation among us. Now, thank your stars, school people really are asking, how can I prepare this generation for keeping out of civic, economic, political messes such as we are now in?

**W**E USED to send misbehaving children to the principal with notes reeking with "absolutely incorrigible" and the like. I saw last week a written report in more modern style: the good in this boy is obscured by a shell of obstinacy I do not seem able to dissolve. Please have it licked off.

**P**ATIENCE with the dullard may be a rich investment. Wordsworth, Darwin, Beecher and Edison were dunces in school.

**M**Y OLD teacher used to say: children are God's love letters to the human race.

**I**T IS worth remembering that naturally a teacher is a hero to the pupils. It's bad for you to let them realize you know it but to let them lose this belief is tragedy for both of you.

**P**UBLICITY rarely pays when the goods are poor; but getting parents to visit school does make better teaching.

**W**HEN someone urges on you things he calls worth while, ask "Whose while?"

**B**ILL HURLEY says a school superintendent always knows he's right and sometimes he is.

**W**HAT is this "philosophy of life" we hear so much about? An honest meeting of problems of conduct, a sincere solution of them in a way that best suits your own, not another's, judgment.

**T**HE most delightful of all school festivals I ever see is "Appreciation Day." The high school pupils are hosts to their former and present teachers, elementary and high, and to school board members. Boys and girls manage the whole affair, stage entertainment, appreciation address, refreshments and all.

## The School Plant:

# Ancient and Dirty Light Fixtures Waste Power and Harm Eyes

By FRED W. FROSTIC, Superintendent of Schools, Wyandotte, Mich.

**C**HANGES in the type of activities of the modern school organization, designed to meet the ever changing needs of society, have made adequate classroom lighting an increasingly important matter. Almost every school system represents through the types of illumination in its buildings the evolutionary stages in this development.

Not only does the type of school work today require higher illumination values, but the greater number of hours that the school plant is used now makes necessary more adequate lighting service. The educational program can no longer be limited to the hours of ample daylight. Furthermore, the location of some school plants in congested districts often interferes with natural lighting, thus increasing the demand for artificial illumination. As a result artificial lighting equipment has become an essential part of modern school plants.

### *Old Fixtures Are Inefficient*

A study of the lighting requirements of the modern school plant shows that many factors must be considered in order that lighting provisions may be adequate. Some of the more important of these are location and selection of units, wiring capacity, safety and maintenance. Even before the development of incandescent lamps the old type of oil lamps were used so infrequently in classrooms that schoolroom lighting may be considered as having had its beginning with the introduction of electric lamps. Most early electric installations are grossly inefficient in comparison to the lighting intensities considered standard today. Three or four drop cords with a 16 or 32-candle power clear bulb was the type of equipment used in the average schoolroom. The glare of these lighting units was extremely annoying and interfered greatly with vision. The illumination intensity was very low and eyestrain was at a maximum.

The drop cords eventually gave way to heavy opaque bowls that served to diffuse the light in the room and greatly reduced the intense glare of the old clear bulb. Sometimes one such bowl was

placed in the center of the room while in other cases bulbs, usually four in number, were distributed about the room. Fig. 1 represents the light distribution on the working surfaces of one of these rooms equipped with frosted 100-watt lamps and heavy opaque bowls, installed about twenty years ago. The light values are expressed in foot candles. The inadequacy of the equipment is evident. Fig. 2 shows the same distribution with the heavy bowls removed but with the same frosted 100-watt lamps exposed. The bowls reduce the average available light values 31 per cent.

Fig. 3 shows a modern home room in a recently erected building where care has been taken to meet the standards of adequate lighting as it is understood today. The luminaires are of the semidirect

VALUES OF ILLUMINATION AND LOAD FOR WIRING IN SCHOOL INTERIORS RECOMMENDED BY THE AMERICAN STANDARDS ASSOCIATION

	Light Focus	Foot Candles Recom- mended	Watts per Square Foot
Class A—sewing rooms, drafting rooms, art rooms and rooms where fine detail work is to be done.....	On the work	15 to 10	5
Class B—classrooms <sup>1</sup> ....	On desks and blackboards		
study halls and libraries .....	On desks and tables		
shops, manual arts and vocational training, laboratories .....	On the work		
gymnasiums .....	On main exercising floors	12 to 8	3
playrooms and swimming pools .....			
Class C—auditoriums, assembly rooms, cafeterias and other rooms in which pupils congregate for extended periods but which are not used for study .....		5 to 3	1½
Class D—recreation areas, locker rooms, corridors, stairs, passageways and toilets		4 to 2	1

<sup>1</sup>For sight-saving classes of pupils with markedly subnormal vision these values should be materially higher.

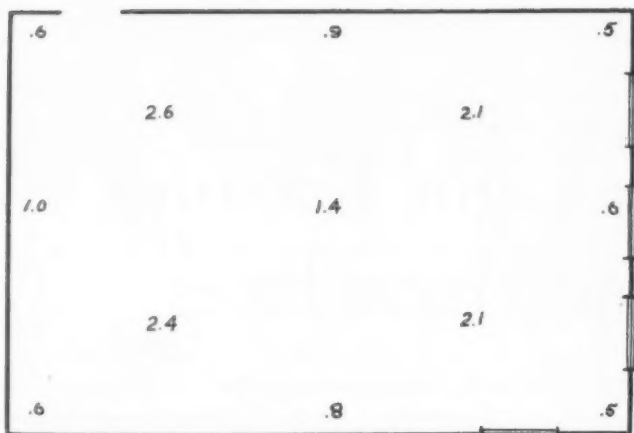


Fig. 1. Distribution of light values in foot candles from an antiquated type of fixtures. Such lighting equipment is still common in the older type of buildings. The highest values are directly under the four fixtures.

type, which provides relatively high values of illumination for the amount of current required. Note the relatively even distribution on the working surfaces. The entire room is evenly illuminated and no strong shadows exist from uneven distribution.

The American Standards Association has recommended the values of illumination and load for wiring in school interiors as shown in the accompanying table.

A range in foot candles is given in the table rather than single foot candle values in order to allow for exceptionally favorable conditions. The latitude, the number of sunshine hours, the presence of trees or other buildings and the hours the building is used are factors that affect these conditions. Buildings whose corridors are well lighted from natural sources and which have high light reflecting values in the walls and ceilings might well use the lower values if the plants are used for day hours only. In most cases, however, especially in northern latitudes, the higher values will be found more adequate.

#### *Every School Should Test Its Lighting*

The selection and location of luminaires are extremely important. Among the factors to be considered are efficiency, freedom from glare and shadows, maintenance, initial cost and appearance. The units should be arranged so as to make the distribution as even as possible.

The American Standards Association recommends that "the spacing of outlets should not exceed one and one-half times the distance from the unit to the work plane or, in case of indirect units, from the ceiling to the work plane. The spacing between the outlets and the wall should not exceed one-half the maximum permissible spacing between the outlets in rooms having an aisle next

to the wall, or one-third the maximum permissible spacing of the outlets where work is carried on up to the wall."

The efficiency of units varies greatly in the quantity, the quality and the distribution of light per unit of current. The maintenance department of every school system that has any considerable amount of school lighting should be equipped with a good illumination meter that is capable of measuring up to 250 foot candles. With such an instrument it is possible to make careful comparisons of the above factors.

The use of such an instrument in a certain school system has paid for itself many times over on a single building installation in cost of current and in initial cost of equipment. Tests should be made in identical working surface locations with different complete unit installations. The same bulbs should always be used in making tests. The bowls of all the units in the room should be changed for each comparison. If the bowls are not interchangeable, the entire unit should be changed. In determining the best type for a particular building I have made tests covering as many as fourteen types of fixtures, testing them in a single room under directly comparable conditions.

#### *Efficiency Reduced 39 Per Cent by Dust*

Freedom from glare and shadows is not as yet subject to careful measurement. Conditions can be fully described, however, for comparative purposes. Appearance is also more or less subjective and should be taken into consideration in the same way as glare.

The factor of maintenance is often overlooked in selecting fixtures. The accumulation of dust in or on fixtures is a matter that must be considered. A study of light efficiency in a small building where considerable dust was allowed to accumulate on the

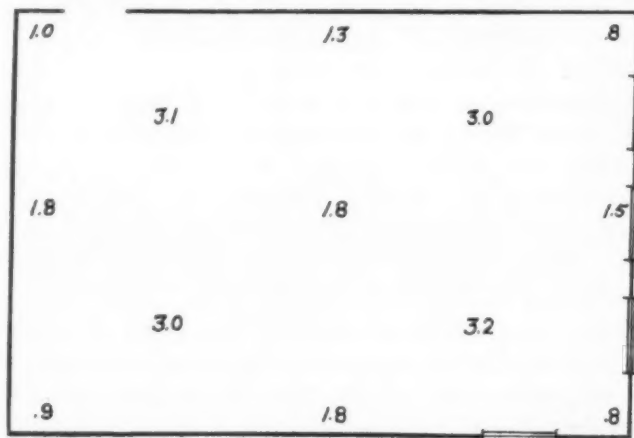


Fig. 2. Distribution of light values in foot candles from the same fixtures as in Fig. 1, with the bowls removed. The efficiency is 31 per cent higher but still too low to give adequate lighting for any type of school work.

top of a standard type of closed fixture that distributed light both indirectly and directly showed a reduction in efficiency of 39 per cent due to dirt and dust. The cost of current in this building during the year the tests were made was \$245.93. The waste of current, therefore, amounted to \$95.83. This illustrates the importance of selecting units that collect as little dirt as possible, especially in

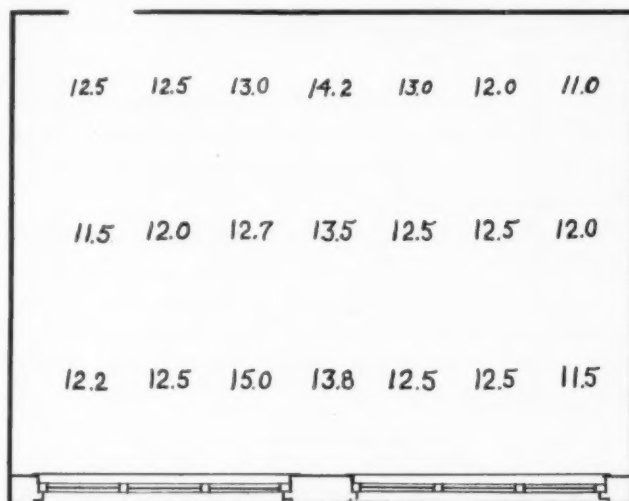


Fig. 3. Distribution of light values in foot candles in a modern installation. Note that the widest range is but four foot candles. Glare and heavy shadows are absent. Six units of 200 watts each are used.

the case of large buildings. The cost of cleaning must also be estimated carefully. This can be determined by actually cleaning a sample set of units as installed. Possible breakage due to the degree of difficulty in handling parts that must be washed at frequent intervals must be considered.

A general schedule of washing units cannot be set up for universal application within the same system. Some buildings accumulate more dust and dirt than others, due to the type of yard, the walking surfaces over which pupils travel, the size of the building, the administration of children, the heating system and the location of the building with regard to manufacturing centers.

The need for careful checking of lighting units is evident. This applies to new installations, and especially to old installations. A check of the building represented in Fig. 1 showed that the units used cut off 31 per cent of the lighting efficiency compared to the results that could have been achieved by installing a better type of fixture. This waste of 31 per cent had been going on for many years and would have continued for a long period to come if the lighting efficiency had not been measured by an accurate illumination meter.

Beyond the actual loss in efficiency of current, however, is the immeasurable loss due to poor vision and eyestrain upon hundreds of children.

Savings in operation or the selection of lighting units that reduce the available illumination below the minimum standards required for work will never repay for the impaired vision and reduced efficiency in school work that result from such false economy.

The problem of adequate lighting must be solved by careful tests within each building. This can be done by the maintenance department. The only equipment needed is an accurate measuring instrument, the cost of which need not exceed \$100.

## Social and Educational Trends in the United States

There are three trends in American social life which are of major importance to the school, according to Dr. Charles H. Judd, University of Chicago. The first is the trend toward small families. It has been shown in recent investigations that the average number of persons in a present day family in the United States is three and six-tenths. This is in sharp contrast with the families which were common at the beginning of our national life.

A second trend of importance is the trend away from the employment of young children in industry. When machinery first began to be used on a large scale in this country, it was profitable to employ children in manufacturing plants. Between 1910 and 1920, the trend started in the other direction.

A third trend appears in the fact that the courts of today are clear in their rulings that parents may not dispose of their children as they choose without regard to the public good. A child is recognized today as having certain rights which the state will defend.

The three trends can all be summed up in the statement that a new conception of the value of a child to society has evolved and is accepted by modern society. The direct corollary of this new conception of the value of a child is the establishment of a system of training which shall conserve every child and prepare him to be a useful member of society.

At the present moment, there seems to be a lapse in the recognition of the value of children in American society. The cry of the tax strikers is not against antiquated governmental forms, as it should be, but against schools and children. Teachers, who are in no wise responsible for the social changes which have filled the schools to the limit, are accused of all kinds of waste and extravagance. The fact is that society is unable to live up to its best developments and is striking back at its own offspring.

What is needed in this country, Professor Judd believes, is a sober consideration of the rights which a long social evolution has accorded to children. Parents should think of children in the mass in the same terms in which they think of their own children. Children are important because they are few in number and because they are future citizens. Parents should realize that children are excluded from industry and must, therefore, be provided for in hygienic schools equipped with the necessary materials and teachers to prepare every child so far as possible for happy and successful life in a complex modern civilization. Temporary retrenchments must not reverse the trends which have been established during recent generations of respect for children's rights.

# Your School— Its Construction and Equipment

A Department Conducted by CHESTER HART, B.Arch., Chicago

## A Protection Against Dirty, Worn Entrance Floors

Entrance and lobby floors may be protected from dirt and wear by Lynlink rubber and leather mats, made by the Lynn Leather Washer and Mat Co., Manchester, Conn. The mats are one-half inch thick, with alternate open spaces and laminated solids, held together by rustproof wire links that bind each section. The stock sizes for these mats range from 15 by 24 inches to 24 by 36 inches, but they may be had in any special size desired. Stock mats are made with a border and either a diamond center or a plain center. However, many combinations of colors and designs may be obtained from the manufacturer.

## A New Food Slicer for the School Cafeteria

A small, manually operated, automatic food slicer is a recent product of the U. S. Slicing Machine Co., LaPorte, Ind. It is especially adaptable for the school lunchroom or as auxiliary equipment in the larger cafeteria.

The slicer has an 11-inch automatic adjustable



*This manually operated automatic food slicer is especially adaptable for the school lunchroom.*

feed that will produce slices up to  $\frac{5}{8}$  of an inch thick, and the 10-inch chromium plated wheel blade will cut over a  $6\frac{1}{2}$ -inch surface. An automatic double stone sharpener attached to the slicer makes it possible to keep the blade sharp at all

times. All moving parts of the machine are protected with guards. The machine is easy to clean because all parts that come in contact with food are chromium plated.

The wheel blade and the slicing mechanism are operated by a single lever handle, and the free-wheel control prevents waste and smearing in the cutting operation. The slicer may be used for cutting hot and cold meats, cheese, bread, cake, fruits, pickles and vegetables.

## Protection Against Dry Firing Steam Boilers

The Minneapolis-Honeywell Regulator Co., Minneapolis, has announced a new bellows-sealed, packless construction low water cut-off, duplex switch and water feeder that safeguards the steam boiler from being fired dry. The elimination of manual attention to this detail is especially important with automatically fired plants. The control is designed for gauge glass mounting, which makes the installation simple and inexpensive.

Protection against low water may be provided in two different ways. In the first method, the fire is shut down and kept down until the boiler is manually refilled. This is accomplished with the low water cut-off that is connected into the electric circuit so that a low water condition cuts off all power through a mercury switch.

In the second method, the fire is shut down, and simultaneously an automatic water valve opens to allow refilling of the boiler. The low water cut-off and the silent solenoid valve supply this entirely automatic safety control. If the water feeder valve is not used, the connections provided for it may be used to operate an alarm bell. The water feeder valve is installed directly in the cold water inlet and, therefore, it is free from the liming and sediment collection troubles often encountered in the hot water zone.

To simplify further installation and reduce cost the steam or vapor pressure control or vacuum control may be screwed into the built-in siphon on

# These schools *modernized*

LEHIGH UNIVERSITY  
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ST. ANTHONY'S COLLEGE  
San Antonio, Texas

LADY OF THE LAKE COLLEGE  
San Antonio, Texas

UNIVERSITY OF MARYLAND  
College Park, Md.

PRATT INSTITUTE  
Brooklyn, N. Y.

BRYN MAWR COLLEGE  
Bryn Mawr, Pa.

CONNECTICUT COLLEGE FOR WOMEN  
New London, Conn.

GIRARD COLLEGE  
Philadelphia, Pa.

JOHNS HOPKINS UNIVERSITY  
Baltimore, Md.

UNIVERSITY OF TEXAS  
Austin, Texas

UNIVERSITY OF MICHIGAN  
Ann Arbor, Mich.

HOUGHTON COLLEGE  
Houghton, New York

LAWRENCEVILLE SCHOOL  
Lawrenceville, N. J.

WEBER SCHOOL  
Saginaw, Michigan

COLGATE UNIVERSITY  
Hamilton, N. Y.

## and they did it with *Sealex*

**E**VEN if funds available for modernizing work are limited, you can make them accomplish a lot by following the example of the schools and colleges listed above. Refloor with Sealex.

The new Sealex Linoleum—in an attractive solid color or harmonious pattern—goes down right over the unsightly old floor. In place of dust-collecting cracks, you have a smooth sanitary surface that may be kept clean easily and inexpensively. In place of noise—quiet underfoot. Sealex muffles footsteps.

Another material specially recommended for modernizing work in schools is Sealex Wall-Covering. This remarkable wall-covering is washable, stain-proof, fade-proof and crack-proof. Without repainting or refinishing, it will last the life of the building in which it is installed.

The approaching Christmas holidays make an opportune time for remodeling. Why not start your planning now? One of our field engineers will be glad to call on you and give you the benefit of this organization's extensive experience in school work. No obligation, of course.

When Sealex materials are installed by an authorized contractor of Bonded Floors or Bonded Walls, both workmanship and material are backed by a Guaranty Bond.

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**SEALEX**  
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**FLOORS AND WALLS**



the top of the low water cut-off, thus making it a duplex switch. This combination provides high limit control and automatic shutdown in case of low water. The water feeder may also be used with the duplex switch as described above for use with the low water cut-off.

The low water cut-off and duplex switch are designed for use on any pressure or vacuum system up to twenty-five pounds.

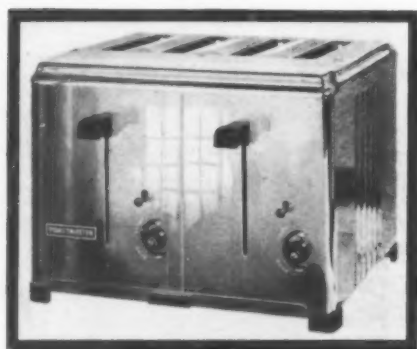
## A Sandpaper That Cuts Fast and Wears Long

An electric process for coating sandpaper has produced a sheet abrasive that gives quick results and has long wearing qualities. The increased efficiency is provided by presenting a maximum number of cutting points evenly distributed over the surface of the sheet. The electric process stands each grain on its long axis, thereby increasing the length of time the sandpaper may be used. The improved cutting efficiency produces a smooth, uniform finished surface on wood, metal, paint, rubber, marble and other common building materials. Various shapes, styles and abrasive grits suitable for every purpose to which sandpaper is applicable are included in this line.

## Flexible Toaster Control Ensures Uniformly Brownd Toast

A two-slice and a four-slice Toastmaster, made by the Waters-Genter Company, Minneapolis, are of the heavy duty, self-timing type.

The flexible clock timing device is a self-accel-



*This is the four-slice model toaster. A timing device gradually decreases the time that bread remains in the toaster.*

erating mechanism that gradually decreases the time that bread remains in the toaster, thus giving uniformly toasted slices. If the toaster is started cold the first batch will be finished in 105 seconds, the second batch in 85 seconds and the third batch in 75 seconds. These figures give an approximate time ratio, and indicate the saving in electrical cur-

rent that is achieved by taking advantage of the accumulated heat of the machine from previous use. The variation in toasting time is automatically set by the flexible clock so that uniform browning is obtained regardless of the number of batches toasted.

The four-slice model has two two-slice units that operate independently so that there is no wasted electricity if only two slices of toast are wanted. Both models are built along simple straight lines and are chromium finished to make cleaning an easy operation. No special wiring is necessary as the attached cord may be plugged into any convenience outlet.

## Waterproof Carpet for Protecting Ornamental Floors

Lobby and vestibule floors that need protection during wet weather or during periods of extra heavy traffic may be covered with a new waterproof carpet that is made by the St. Clair Rubber Co., 440 Jefferson Avenue, East, Detroit. Further uses for this type of covering may be found in gymnasium locker rooms, and adjacent to swimming pools, where its nonskidding qualities will prevent accidents.

Rubber-Tex is made of carpet impregnated with liquid rubber and vulcanized to a heavy rubber base. The carpet is made of cotton, jute and wool fiber, with the warp testing fifty pounds pull per inch and the filler ninety pounds. The rubber is a black compounded stock that may be bent double without breaking. Wearing tests indicate that the carpet construction is rugged enough to withstand long, hard and constant wear.

The carpet may be cleaned with a broom, or if badly soiled a hose may be used to wash off the dirt without injury to the carpet. This simplifies the problem of cleaning.

The carpet is made in three shades, green, natural brown and red. It is available in 27, 36 and 54-inch widths in the natural brown shade, and 48 inches wide in the red and green shades. The length of the rolls ranges from 30 to 35 yards. The carpet may be cut into lengths to fit any floor, and does not require any special edge protection, which is a considerable advantage.

The value of this type of floor covering is twofold in that it prevents the abrasive action of mud, dirt and water ground beneath shoes from injuring the permanent floor, and persons instinctively follow the rug as a guide, thereby keeping unprotected floor spaces from being soiled. This protection of public property should win the approval of the taxpayer.

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## NEWS OF THE MONTH

### Progressive Education Association Considers New Demands at N. Y. Regional Conference

The regional conference of the Progressive Education Association, held in New York City on November 24 and 25, brought together educational leaders from many different sections of the country to consider revisions of the educational program of the school and the home to meet the new demands. Speakers in the sectional meetings, as well as in the general sessions, were carefully selected not alone for their knowledge of the particular subject in hand but for their ability to present ideas that would promote discussion.

The opening session was devoted to a discussion of what parents should expect of the school. "Individual Guidance," "Acquaintance With the Modern World" and "Fundamentals of an Education," were discussed respectively by Lois Hayden Meek, Child Development Institute, Lucy Sprague Mitchell, Cooperative School for Student Teachers, and J. Cayce Morrison, state department of education, Albany.

Two subjects were selected for consideration during the afternoon, one being "Social Change and the Home" and the other, "Education, the Good Life and the Good Society." Norman Thomas was the chief speaker during the afternoon session, addressing the gathering on "What Is the Good Society?"

#### *Dr. Chase Is Banquet Speaker*

The dinner meeting, which was held on Friday evening, was addressed by Harry W. Chase, chancellor of New York University, on "Education Faces the Crisis," Col. Louis McHenry Howe, secretary to President Roosevelt, on "A Modern Education for a Modern Boy," and Boyd H. Bode, Ohio State University, on "Education and Social Change."

Chancellor Chase conceded that elementary school education is being rapidly remade, but said there has been little in the way of fundamental change in outlook at the secondary level in recent years. What has happened, he added, has been merely the decline of certain subjects and the rise of others.

Colonel Howe advocated citizenship education so that from childhood on people may know their responsibilities to government as well as the make-up and function of government. Professor Bode declared that the defect of progressive education in its present stage is not its basic principles but the fact that it has "become sentimental over childhood." "The moral of this situation," he added, "is that if progressive education is to maintain its doctrine of interest it must learn to get its mind off that subject once in a while."

#### *Mrs. Roosevelt Is on the Program*

Mrs. Franklin D. Roosevelt was the speaker at the opening session on Saturday morning, her subject being "A Message to Parents and Teachers." Dr. John H. Finley, associate editor, *New York Times*, acted as chairman.

The balance of the morning and all of Saturday afternoon were devoted to sectional meetings. Five groups were listed for Saturday morning, Group 1 being "Education's Responsibility for a Social Responsibility." Paul M. Limbert, New College, was chairman and A. Gordon Melvin, College of the City of New York, was the speaker, his subject being "The Need for a Social Philosophy."

Group 2 considered "Frontier Problems in the Elementary School," with Rollo G. Reynolds, Horace Mann School, serving as chairman. The speaker was Laura Zirbes, Ohio State University, who chose as her subject "Elementary Education Looks Ahead." Group 3 had as its subject "Fitting the Program of the Secondary School to the Needs of the Adolescent." Vivian T. Thayer, Ethical Culture School, was chairman and Frankwood Williams, psychiatrist, New York City, spoke on "What Boys and Girls Want of an Education."

The development of a school centered community was the subject of the Group 4 discussion, with Fannie W. Dunn, Teachers College, serving as chairman. The subject for Group 5 was "Education's Responsibility for Better Use of Leisure Time." Forrest E. Long, New York University,

was chairman and Hughes Mearns, New York University, spoke on "Creative Activities Among Adults."

There were also five groups scheduled for Saturday afternoon. Group 1 considered the subject of "New Freedom and the Secondary School Curriculum." Two speakers were scheduled, H. W. Smith, principal, Fieldston School, who had as his subject "Curriculum Construction in the Fieldston School," and Edith M. Penney, principal, Bronxville High School, who spoke on "Curriculum Construction in the Bronxville High School." H. Gordon Hullfish, Ohio State University and the Dalton School, was the chairman.

Group 2 discussed teaching for realistic living, the two speakers being Roger Baldwin, Civil Liberties Union, who spoke on "The Difficulties of Facing Social Problems Realistically," and Robert B. Raup, Teachers College, who discussed "The Larger Implications of Realistic Living." Elmina R. Lucke, Lincoln School, was chairman.

William H. Kilpatrick, Teachers College, was the chairman of Group 3. The subject selected was an evaluation of the liberal arts education. The teacher's responsibility for guidance formed the subject discussed by Group 4, with Caroline Zachry, State Teachers College, Montclair, N. J., speaking on "What Guidance Can Be Expected of the Classroom Teacher?" and Alice Keliher, Hartford, Conn., serving as chairman.

Harold Rugg, Teachers College, was chairman of Group 5, which had as its subject "Social Change: The Need for an Informed Public Opinion."

### Botanical Garden Enhances Hunter College Grounds

A miniature botanical garden with a rock garden and artificial pool is being developed at the rear of Davis Hall in the Bronx Annex of Hunter College, New York City. The garden, which not only beautifies the rear approach to the building but provides a convenient supply of illustrative material for botany students, is being made by the students. A prominent local nurseryman has contributed a dozen trees to serve as a background.

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February 12, 1934, will mark the 125th anniversary of Lincoln's birth. Make it a memorable occasion for your pupils by showing

them the Eastman Classroom Film, *Abraham Lincoln*. This inspiring and authentic 2-reel picture costs but \$48 complete.

## *Eastman* CLASSROOM FILMS

## NEWS OF THE MONTH

### School-Village for Delinquent Boys Dedicated

A state training school for delinquent boys, with a medical unit for the study of their behavior, was dedicated at Warwick, N. Y., on October 15. The \$2,000,000 building project now includes thirty-two finished buildings, with two more still to be constructed.

The school is a self-contained village where the boys will receive regular school work and vocational training. The Columbia University Medical Center is cooperating in a medical psychiatric study to determine methods of rehabilitating these boys for society.

Dr. Frederick Tilney, professor of neurology and neurologic anatomy, is chairman of the medical board, which has been conducting clinics for the children for the past year. About 300 boys are already settled at the school. Its capacity is 500.

Teachers College of Columbia University is collaborating in the educational program and the state is now seeking advice of business men concerning the occupational future of the boys, according to Doctor Tilney in his address at the dedication.

There will be a resident staff and a visiting staff which will include specialists in various branches of medicine, dentists, surgeons, psychologists and social workers. Acute medical and surgical emergencies will be cared for at the school hospital or at the medical center in New York City.

### College Will Open Camp in Teacher Training Course

As a further step in the development of its teacher training system, New College, an experimental branch of Teachers College, Columbia University, has established a camp for high school boys and girls. The camp will be an integral part of the college community established a year ago near Waynesville, N. C. It will be opened June 17, 1934, under the direction of Mildred Bruckheimer.

Fifty boys and girls will be admitted, all of whom will be afforded opportunities for any necessary special tutoring. According to Dr. Paul M. Limbert, associate at New College, "This camp is not considered by the

directors as a vacation in the sense of relief from educational pursuits, but as the continuation of a child's educational program under conditions of absorbing interest and stimulating intellectual and social enrichment."

### Junior High School Named

Public School No. 142, Queens, Long Island, N. Y., is now designated as the Edgar D. Shimer Junior High School. This action was taken in acknowledgment of the services performed by Doctor Shimer, formerly the associate superintendent of schools.

### New Jersey Teachers Hold Seventy-Ninth Convention

More than 5,000 teachers of New Jersey registered at the seventy-ninth annual convention of the New Jersey State Teachers Association, held November 10 to 13 at Atlantic City. The general theme of the convention was "Preserving Educational Standards and Ideas." Frank G. Pickell, superintendent of schools, Montclair, N. J., was reelected president, marking the second time in the history of the association that a president has ever been elected to succeed himself.

### Zook Explains Availability of CWA Funds; Asks Cooperation in Unemployment War

Dr. George F. Zook, U. S. commissioner of Education, announced on November 28 the modification of the emergency educational program resulting from the establishment of the civil works administration, and the opportunities for repairs, improvements and extensions to educational buildings and grounds of public institutions of learning throughout the United States, under the civil works program.

Commissioner Zook reports that Harry L. Hopkins, federal emergency relief administrator, has authorized the use of federal civic works administration funds for school building repair jobs, such as painting, electrical wiring, paper hanging, roof repairs, repair of school furniture, construction and repair of school playgrounds and equipment and modernization of sanitary facilities.

Since these projects are an essential part of the nationwide civil works program to put unemployed men to work, the approval of state departments of education is not necessary, it is pointed out. Funds are provided for repair materials as well as for wages. Any school or college under public auspices may share in this civil works program, according to the recent announcement.

Emergency educational programs are now considered specialized work projects. Special grants earmarked for education will be made to states

as heretofore. Those emergency educational programs already organized under state plans or those to be approved as eligible for use of relief funds will remain on those funds and will not be transferred to the civil works administration.

Newly adopted rulings relative to the emergency educational program specify that daily or hourly wages of teachers should equal those customarily paid in a community for similar work, Commissioner Zook points out. The weekly wage for teaching will be sufficient to permit a reasonable standard.

No change has been made in educational projects for which federal funds have been authorized. These include: (1) rural elementary schools; (2) classes for adult illiterates; (3) vocational education; (4) vocational rehabilitation; (5) general adult education, and (6) nursery schools, all to be under the control of the public school system. No change has been made in rules and regulations governing eligibility of teachers for work on educational projects, and as heretofore the procedure governing preparation, submission and approval of state plans remains in full force as it has been in the past.

Commissioner Zook urges the cooperation of school authorities throughout the United States in helping to put unemployed men and women to work.

● Cafeterias are usually noisy places. In Copernicus High School, Hamtramck, Michigan, Acousti-Celotex corrects this difficulty.



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tance: Acousti-Celotex can be applied directly to existing ceilings and walls. No structural changes are necessary.

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## NEWS OF THE MONTH

### \$500,000 Appropriation for Detroit School Repairs

Detroit schools started recently to put men to work under the board of education's \$500,000 allotment for school repairs and upkeep. The school board's allotment is part of \$6,542,200 to be financed by the civil works administration.

The \$500,000 is a minimum figure. Laurence G. Lenhardt, director of the city's civil works program, has indicated that because of the urgent need for school repairs as much as \$1,000,000 may be devoted to this work.

Reconditioning, painting, alterations, replacing unsafe wiring and rebinding books will constitute the major projects to be undertaken in the schools.

Frank Cody, superintendent of schools, has appointed a committee to negotiate with the county relief administration.

### Craftsmanship Contest for Boys Is Announced

Twenty-four university scholarships with an aggregate value of \$51,000 will be offered young craftsmen in the fourth annual coach building competition of the Fisher Body Craftsman's Guild, an organization dedicated to the development of handiwork and craftsmanship among boys. The guild is sponsored by the Fisher Body Corp., Detroit. In the 1932-33 competition only seven scholarships were awarded.

In general the competition for 1933-34 retains the form that has been so successful in the past three years, but some important changes that more clearly establish the guild's position as an educational foundation are included.

Enrollment this year will be placed on a selective basis and local school authorities will judge the entrants' qualifications for competition. Every applicant must have his enrollment application endorsed by his school superintendent or principal, by his manual arts teacher or similar boys' activity leader and by his parent or guardian.

Sixteen of the twenty-four scholarships will go to American boys and the remaining eight to Canadian boys.

All model coaches will be judged in Detroit or Toronto and all will be eligible for national awards as against the former ruling that only state winners were eligible for national judging.

The twenty-four university scholarships will be divided as follows: six of \$5,000 each; six of \$2,000 each; six of \$1,000 each and six of \$500 each. Scholarship awards are placed in trust for winners until they are ready to matriculate, at which time both interest and principal are devoted to their education at any recognized university.

The project will again be the building of a miniature scale model of a Napoleonic coach. Age limits are twelve to nineteen, inclusive, divided into junior and senior groups. Inter-school competition and plaque awards which have proved so successful in the past will be continued on a new selective and nominative basis.

In many schools work done in the guild competition is credited as part of the manual arts course. On approval of the application, plans for the Napoleonic coach are supplied by the guild and the competition is thenceforth solely a test of craftsmanship.

### Boarding Schools Report Larger Enrollment

Boarding schools of the country which prepare boys and girls for college have a slightly larger attendance than a year ago, according to a nationwide census of schools reported by N. W. Ayer & Son, Philadelphia. The total attendance in 200 schools—boys' military, boys' nonmilitary, girls' and coeducational prep schools—this year is 24,705. Last year, for the same schools on the same date, the total was 24,611. The boys' military and the girls' schools show the greatest increase.

There was a decline of a little over 3 per cent in the attendance at liberal arts colleges this year. Vocational schools show a drop of from 9 to 20 per cent.

The increase in boarding schools is in practically every section of the country, although small schools with a tuition of \$1,200 or more show the greatest gain. Medium priced schools

have almost the same attendance as a year ago.

When comparison is made of boarding schools on the basis of those which are 90 per cent full, the figure this year is 28 per cent against 24 per cent last year for the same schools.

Many schools report that they have enrolled more new pupils this year than last, but because of the graduation of extra large classes in June the total attendance is not so large as in 1932.

### Plan for Teaching Motion Picture Appreciation

A plan for teaching motion picture appreciation to the young was outlined recently in a conference called by Dr. George F. Zook, U. S. commissioner of education. In opening the conference, which was held in Washington, D. C., Commissioner Zook stated that he regarded motion pictures as tremendously promising in the development of education.

Motion pictures are a powerful educational influence both for good and evil, Dr. W. W. Charters, director, bureau of educational research, Ohio State University, indicated in his report of the Payne Fund motion picture research studies which have been completed recently.

Representative high schools in several states will be selected to use Dr. Edgar Dale's book, "How to Appreciate Motion Pictures," as a text in the planned experiment to educate boys and girls in motion picture appreciation.

### Estimate Unemployed Teachers at 80,000

The U. S. Office of Education reports that eighteen states are showing a material decrease this year in the number of teachers they are employing in their public school systems. In nine states alone, it is stated, there are more than 5,000 teachers who are unemployed.

On the basis of these reports from state superintendents of education, the Office of Education estimates that there will be 80,000 unemployed teachers this year.

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### To Harrow Again

The farmer, after plowing his field, goes over it with a harrow to break up the clods and level the ground. Sometimes, in order to make the field still smoother, he harrows it over again.

Old French *herce* meant "a harrow," *hercier* "to harrow," and *rehercier* "to harrow over again," borrowed in Middle English as *rehercen*, Modern English *rehearse*. Now we *rehearse*, not the plowed field, but a speech, a play, or the like.

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## Webster's New International Dictionary

A Merriam-Webster

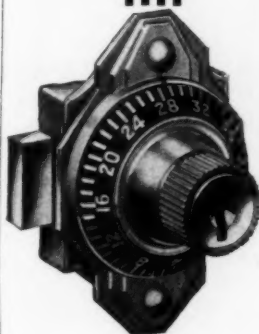
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## NEWS OF THE MONTH

### Federal Educational Agencies Are Merged

The union of two major federal agencies concerned with the promotion of education in the United States under the department of the interior is announced by Harold L. Ickes, secretary of the interior.

By official order the functions of the federal board for vocational education are transferred to the U. S. Office of Education in the department of the interior.

Dr. George F. Zook, U. S. commissioner of education, will direct the activities of the enlarged federal office of education.

"This transfer of the functions of the board is not to be interpreted as any curtailment of the activities of the federal government in the field of vocational education," said Secretary Ickes. "Both Commissioner Zook and I have long been deeply interested in vocational education and we both propose to promote the development of this highly important part of the field of education vigorously."

Secretary Ickes changed the designation of Dr. J. C. Wright, from "director, federal board for vocational education," to "assistant commissioner for vocational education" with "no change in duties."

In 1917, only six states had any organized programs of vocational education. In 1933, all forty-eight states, the Territory of Hawaii, and the Island of Puerto Rico have well organized programs in agriculture, trades and industries and home economics, and forty-four states have programs for the vocational rehabilitation of disabled civilians. More than 1,150,000 youths and adults are enrolled in day, part-time and evening schools and classes. Nearly 30,000 teachers are employed.

Of the total enrollment about one-third are adult workers, another one-third are young workers who have left the full-time school but who return for a portion of their working day to attend a vocational school. The remainder are boys and girls who have not yet entered upon employment and who are devoting full time to preparation for work.

The U. S. Office of Education is now being called upon to assist in the educational aspects of the new govern-

mental activities inaugurated within the last six months. The office of education is acting as consultant and assisting with the educational activities of the federal emergency relief administration, on school building problems in connection with the public works administration, on educational problems of the citizens conservation corps, and on problems growing out of the NRA ban on child labor and code regulations on training for industry, as well as numerous other federal activities.

### Vocational Association Meets in Detroit

The American Vocational Association held its eighth annual convention in Detroit, December 6 to 9, where educators and other leaders in eight divisions of public schooling met to crystallize plans for the accomplishment of the school's obligation to the youth of today.

The eight divisions represented were agriculture, vocational guidance, part-time, industrial arts, trade and industry, home economics, reeducation of disabled persons and commerce.

Dr. George F. Zook, U. S. commissioner of education, was one of the principal speakers. He appeared at the general session on Friday evening with Mrs. B. F. Langworthy, first vice president of the National Congress of Parents and Teachers, and Chester Gray, head of the Federal Farm Bureau Association.

Warren Bow, assistant superintendent of schools, Detroit, was chairman of local arrangements. Earl Bedell, assistant director of vocational education, Detroit, was executive secretary of the local committees, and Ereminah D. Jarrard, principal, Girls' Vocational School, Detroit, was chairman of the publicity committee.

### Two Changes Made in White Plains Schools

The Battle Avenue Junior High School, White Plains, N. Y., has had its name changed to the Battle Hill School. The Mamaroneck Avenue School in that community has been dropped from the secondary schools.

### Negro School Conditions Described in U. S. Report

Inaccessibility of schools is one of the most important factors causing nonattendance of more than 1,000,000 Negro children in the United States. In a special study by the U. S. Office of Education of rural elementary Negro children it was discovered that nearly half of them live two or three miles from a school. Since school bus service is provided for only 1 per cent, nonattendance on the part of those who live at a considerable distance from schools is common.

"Rural Elementary Education Among Negroes Under Jeanes Supervising Teachers," by Dr. Ambrose Caliver, U. S. Office of Education specialist in education of Negroes, reports that "more than one-third of the Negro pupils never go beyond the first grade, and nearly three-fourths never advance beyond the fourth grade."

#### Equipment Is Inadequate

Other significant findings follow:

"Negro pupils are greatly retarded. The proportion of pupils who are overage is approximately two-thirds. It is believed that much of the retardation is due to shortness of the school term, poorly prepared and overburdened teachers and lack of equipment. The average salaries of teachers range from \$346 to \$478.

"The equipment of Negro rural schools is, in the main, meager and inadequate," Doctor Caliver points out. "Nearly 40 per cent still use benches with no desks. A few schools have no blackboards at all. Ordinary stoves are used to heat more than half of the school buildings, most of which have no fire protection facilities."

Harold L. Ickes, secretary of the interior, referred to the findings of the federal government in a recent radio address as follows: "The conditions just described put the Negro in a serious plight. Unless improvement is made in his education, he will not be able to keep pace with the rapid movement of our present age. We owe it not only to the Negro but to ourselves, if we have any real regard for the welfare of our country, to give the Negro the fullest possible educational opportunities."

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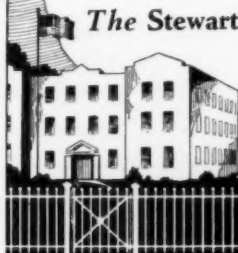
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## In the Educational Field

W. D. WALDRIP was recently appointed superintendent of schools, Savannah, Ill. MR. WALDRIP served for several years as superintendent of schools at Streator, Ill.

DR. FREDERICK B. ROBINSON, president of City College, New York City, has been elected president of the New York Academy of Public Education.

A. C. SISLER, assistant superintendent of schools, Lawrence County, Ohio, has been elected president of the Southeastern Ohio Superintendents Association.

LEVI T. REGAN, Chicago, a retired educator, died recently at his home in that city. He was principal of Sherman School, Chicago, for thirty-six years, retiring in 1926 at the age of 83. MR. REGAN served as superintendent of schools, Logan County, Illinois, and held similar posts at Amboy and Morris, Ill.

WALES RICHARDSON HOLBROOK is the new headmaster of Bonita School, Bonita, Calif., the management of the school having been transferred to him by MR. and MRS. LEON DURAND BONNET.

DR. D. SHAW DUNCAN, professor of history and the social sciences at the University of Denver, has been compelled because of ill health to resign his position of dean of the graduate school. He still retains his position as chairman of the division of the social sciences and is teaching full time.

C. J. CHEAVES, superintendent of schools, Ashburn, Ala., was named president of the Georgia Association of School Superintendents at the organization's recent meeting in Atlanta.

DR. EDWIN A. LEE, professor of education and director of vocational edu-

cation at the University of California, has been named superintendent of the San Francisco Public Schools.

HERBERT C. BROWN is the new superintendent of schools, Howard County, Maryland.

DR. BANCROFT BEATLEY, JR., in his inaugural address as second president of Simmons College, which was delivered at the installation ceremonies held November 1, stressed the need for coordinating vocational and cultural education to meet present day demands. DOCTOR BEATLEY was called to the Simmons presidency in June from the Harvard Graduate School of Education.

MAY MARGARET FINE, founder and head mistress of Miss Fine's School, Princeton, N. J., a preparatory school for girls, died recently.

H. A. REDFIELD of the A. J. Nystrom Company, president of the Associated Exhibitors, and STANLEY R. CLAGUE of The Nation's Schools Publishing Company, secretary-treasurer of the Associated Exhibitors, have been appointed professional consultants to the Joint Commission on the Emergency in Education.

WILFRED L. BROOKER, superintendent of schools, Asheville, N. C., has been selected to head the school system in Ashland, Ky., to succeed J. D. FALLS, who has resigned, effective December 31. MR. FALLS has been associated with the Ashland schools for approximately twelve years.

FLOYD T. GOODIER, Chicago Heights, Ill., has been named state supervisor of elementary schools for Illinois, succeeding the late W. S. BOOTH. MR. GOODIER has been engaged in educational work for twenty-three years.

made available for the support of this annual art display and other activities in high school art education.

The forthcoming exhibit will include an international section to which six European countries have so far accepted an invitation to submit art work of pupils of secondary school age and grading. The European pupils will not be competing with American pupils, however, because the international section is to be an entirely separate division of the display.

This yearly collection of the best high school accomplishments in drawing, painting, carving, designing, weaving and modeling is selected from work submitted from every part of the country in a huge annual competition in literature and the fine arts. Thousands of dollars in cash, scholarships and national honors are distributed among pupils each year through this competition.

Eleven full term scholarships of nine months study and one summer session scholarship to art schools of national repute are being offered.

In the literary division there are to be prizes and honors for student stories and essays.

Entries for the awards must be submitted to the juries before midnight, March 20, 1934.

### N. C. Radio School Gives Ten-Week Program

The North Carolina Radio School program was started on October 16. It is offering the following schedule of broadcasts for ten consecutive weeks: Monday, 11:30 to 12:00, current events, geography and travel; Tuesday, 11:30 to 12:00, industrial arts and vocations; Wednesday, 11:30 to 12:00, literature: prose, poetry and song.

### New York City Proposes Big School Expansion

A request for federal funds amounting to \$16,486,808 to build seventeen new public schools and to complete nineteen others in the city has been approved by the board of education, New York City.

The program outlined by the board of education includes twelve new elementary and five new high schools, and the completion of thirteen elementary and six high school buildings. The new buildings would seat 31,000 and the uncompleted structures 23,700.

The total estimated cost of the new high schools is \$9,293,650 and of the new elementary schools, \$5,086,606. Added to the \$2,106,552 cost of equipment to complete the other buildings, the total amount comes to \$16,486,808.

### Annual Art Contest Will Be Held in Pittsburgh

The seventh annual high school art exhibit sponsored by *Scholastic*, national high school magazine, will be held next spring in Pittsburgh. This will be the first time the exhibit will have the support of the Carnegie Corporation of New York, which has recently appropriated a small sum for the development of art at the secondary school level. A grant has been



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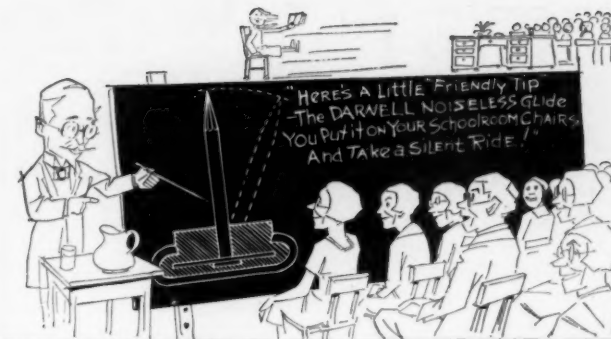


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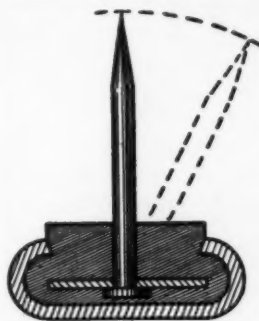
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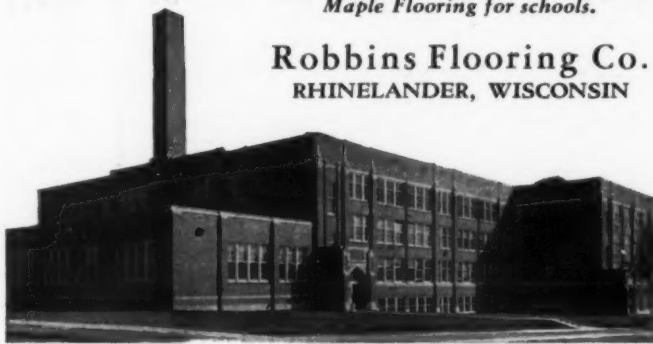
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